United Nations

Framework Convention on Climate Change

FCCC/SBI/2018/17

Distr.: General
21 September 2018

Original: English

Subsidiary Body for Implementation
Forty-ninth session
Katowice, 2–8 December 2018

Item X of the provisional agenda

National greenhouse gas inventory data for the period 1990–2016

Report by the secretariat

Summary

All 43 Parties included in Annex I to the Convention (Annex I Parties) submitted their greenhouse gas (GHG) inventory common reporting format tables and national inventory reports in 2018. By the deadline of 15 April 2018, common reporting format tables and national inventory reports from 41 Parties had been received. Over the period 1990–2016 total aggregate GHG emissions without emissions and removals from land use, land-use change and forestry (LULUCF) for all Annex I Parties decreased by 13.0 per cent, while total GHG emissions and removals with LULUCF decreased by 18.5 per cent. For Annex I Parties with economies in transition, GHG emissions without and with LULUCF decreased by 37.6 and 49.6 per cent, respectively. For Annex I Parties that do not have economies in transition, GHG emissions without and with LULUCF decreased by 1.3 and 2.5 per cent, respectively. The information in this document is based on information in the national GHG inventory submissions of Annex I Parties received as at 31 August 2018. At the time of the publication of this document, the annual review process for GHG inventories from Annex I Parties was ongoing; therefore, the data included in this document may not reflect the latest information provided by Parties. The latest GHG inventory data are available on the UNFCCC website.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), by decision 24/CP.19, requested Parties included in Annex I to the Convention (Annex I Parties) to submit national inventory data on greenhouse gas (GHG) emissions by sources and removals by sinks by 15 April of each year. By decision 13/CP.20, paragraphs 8 and 10, the COP requested the secretariat to compile and summarize information on GHG inventory data submitted by Annex I Parties, inter alia, for consideration by the COP and the subsidiary bodies.

B. Scope

2. This document shows the status of reporting of GHG inventories by Annex I Parties in 2018 (chapter II) and provides a summary of the latest available data on GHG emissions and removals for the period 1990–2016 (chapter III). Data are provided for carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), as well as for fluorinated gases (F-gases),[1] and, where Parties have elected to report them, indirect CO_2 emissions from the atmospheric oxidation of CH_4, carbon monoxide and non-methane volatile organic compounds. Data are provided on total[2] aggregate[3] GHG emissions, both without and with net GHG emissions and removals from land use, land-use change and forestry (LULUCF).

3. The information provided in this document is based on the national GHG inventory submissions received from all 43 Annex I Parties (see table 1) as at 31 August 2018.

4. At the time of the publication of this document, the annual review process for GHG inventories from Annex I Parties was ongoing; therefore, the data presented here may not reflect the latest information provided by Parties. The latest GHG inventory data submitted by Parties are available on the UNFCCC website.[4]

C. Possible action by the Subsidiary Body for Implementation

5. The Subsidiary Body for Implementation may wish to take note of the information contained in this document and to seek further guidance from the COP, as appropriate.

II. Status of reporting

A. Timeliness and completeness of submissions

6. According to the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories" (hereinafter referred to as the UNFCCC Annex I inventory reporting guidelines),[5] Annex I Parties are required to submit annually a national inventory report (NIR) and common reporting format (CRF) tables containing data from the

[1] F-gases comprise hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), an unspecified mix of HFCs and PFCs (MIX) and nitrogen trifluoride (NF_3) taken together.

[2] The term "total" implies that emissions from the sectors of the common reporting format are summed; the inclusion of emissions from land use, land-use change and forestry in the sum is indicated separately; unless stated otherwise, totals do not include indirect CO_2 emissions.

[3] The term "aggregate" implies that GHG emissions and removals are calculated as a weighted sum of CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, MIX and NF_3 using the global warming potential values agreed under the Convention.

[4] http://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2018.

[5] Decision 24/CP.19, annex I.

base year up to two years prior to the year of submission. In 2018 all 43 Annex I Parties provided GHG data for all years from 1990[6] to 2016.

7. By 15 April 2018, CRF tables and NIRs had been received from 41 Parties. Within six weeks of that date, all 43 Parties had submitted their CRF tables and NIRs. After the initial submissions, 11 Parties submitted revised versions of their CRF tables and 9 Parties resubmitted their NIRs. The dates of the initial submissions of the CRF tables are shown in table 1.

Table 1
Greenhouse gas inventory submissions from Annex I Parties in 2018

Party	*CRF tables submission date*[a]	*Party*	*CRF tables submission date*[a]
Australia	13 April 2018	Liechtenstein	12 April 2018
Austria	12 April 2018	Lithuania	13 April 2018
Belarus	13 April 2018	Luxembourg	5 April 2018
Belgium	13 April 2018	Malta	12 April 2018
Bulgaria	14 April 2018	Monaco	14 April 2018
Canada	13 April 2018	Netherlands	13 April 2018
Croatia	12 April 2018	New Zealand	12 April 2018
Cyprus	13 April 2018	Norway	13 April 2018
Czechia	12 April 2018	Poland	10 April 2018
Denmark	13 April 2018	Portugal	11 April 2018
Estonia	14 April 2018	Romania	13 April 2018
European Union	14 April 2018	Russian Federation	14 April 2018
Finland	6 April 2018	Slovakia	10 April 2018
France	13 April 2018	Slovenia	13 April 2018
Germany	5 April 2018	Spain	2 April 2018
Greece	15 April 2018	Sweden	13 April 2018
Hungary	13 April 2018	Switzerland	13 April 2018
Iceland	12 April 2018	Turkey	14 April 2018
Ireland	13 April 2018	Ukraine	*23 May 2018*
Italy	13 April 2018	United Kingdom	12 April 2018
Japan	*24 April 2018*	United States	12 April 2018
Latvia	13 April 2018		

Abbreviation: CRF = common reporting format.

[a] Dates after 15 April 2018 are shown in italics. The dates of submission of the national inventory reports may be different.

B. Recalculations

8. According to the UNFCCC Annex I inventory reporting guidelines, Parties should, where necessary, conduct recalculations in order to improve the quality of their emission estimates and ensure the consistency of the time series.

9. In 2018 all 43 Annex I Parties reported recalculations that had an impact on their estimated GHG emissions for 1990 (see table 2). The recalculations resulted from changes in

[6] Unless otherwise specified, for certain Parties base-year data are used instead of 1990 data. The Parties that may use a base year other than 1990, as stipulated in decisions 9/CP.2 and 11/CP.4, are Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

activity data, emission factors and methodologies. For total aggregate GHG emissions without LULUCF, the change was less than 1 per cent for 33 Parties and more than 3 per cent for 1 Party. For total aggregate GHG emissions with LULUCF, the change was less than 1 per cent for 27 Parties and more than 3 per cent for 7 Parties.

Table 2
Inventory recalculations by Annex I Parties in 2018

Party	*Impact on GHG emissions for 1990 without LULUCF (%)*	*Impact on GHG emissions for 1990 with LULUCF (%)*
Australia	0.06	–0.44
Austria	–0.15	0.06
Belarus	1.72	2.04
Belgium	0.25	0.50
Bulgaria	0.32	0.52
Canada	–1.28	4.65
Croatia	2.38	2.92
Cyprus	–0.54	–3.58
Czechia	0.84	0.83
Denmark	0.15	–0.01
Estonia	–0.01	0.48
European Union	0.06	–0.46
Finland	0.03	–2.27
France	–0.13	–0.02
Germany	0.06	0.06
Greece	0.02	0.08
Hungary	–0.06	–0.01
Iceland	2.20	0.27
Ireland	–1.09	–0.02
Italy	–0.30	–0.26
Japan	–0.12	–0.05
Latvia	1.10	–9.34
Liechtenstein	0.03	0.89
Lithuania	0.14	–3.33
Luxembourg	0.44	0.43
Malta	–11.75	–11.74
Monaco	0.39	0.39
Netherlands	–0.07	–0.07
New Zealand	1.92	5.29
Norway	–0.06	0.13
Poland	–0.09	0.06
Portugal	0.71	–0.43
Romania	0.00	0.00
Russian Federation	–0.89	–0.94
Slovakia	–0.65	–1.58
Slovenia	0.12	1.85
Spain	–0.06	–5.47
Sweden	–0.17	1.88
Switzerland	–0.30	–1.15

Party	*Impact on GHG emissions for 1990 without LULUCF (%)*	*Impact on GHG emissions for 1990 with LULUCF (%)*
Turkey	–1.52	–1.07
Ukraine	–1.58	–2.34
United Kingdom	0.00	0.00
United States	–0.12	–0.13

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

10. Table 3 presents a comparison of the estimates of total aggregate GHG emissions in 1990 contained in Annex I Parties' 2017 and 2018 GHG inventory submissions.

Table 3

Comparison of estimates reported in 2017 and 2018 of total aggregate greenhouse gas emissions of Annex I Parties in 1990

	Estimate reported in 2017	*Estimate reported in 2018*	*Explanation of the difference between the estimates reported in 2017 and 2018*
Total aggregate GHG emissions without LULUCF (thousands of Tg CO_2 eq)			
All Annex I Parties	19.75	19.69	Aggregate impact of inventory recalculations by individual Annex I Parties
Annex I EIT Parties	6.40	6.36	Inventory recalculations, for example by Belarus, Croatia and Ukraine
Annex I non-EIT Parties	13.35	13.34	Inventory recalculations, for example by Canada, Iceland and Malta
Total aggregate GHG emissions with LULUCF (thousands of Tg CO_2 eq)			
All Annex I Parties	18.74	18.68	Aggregate impact of inventory recalculations by individual Annex I Parties
Annex I EIT Parties	6.40	6.34	Inventory recalculations, for example by Belarus, Latvia and Ukraine
Annex I non-EIT Parties	12.34	12.33	Inventory recalculations, for example by Malta, New Zealand and Spain

Abbreviations: EIT = economy in transition, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

III. Overview of emission trends and sources in Annex I Parties

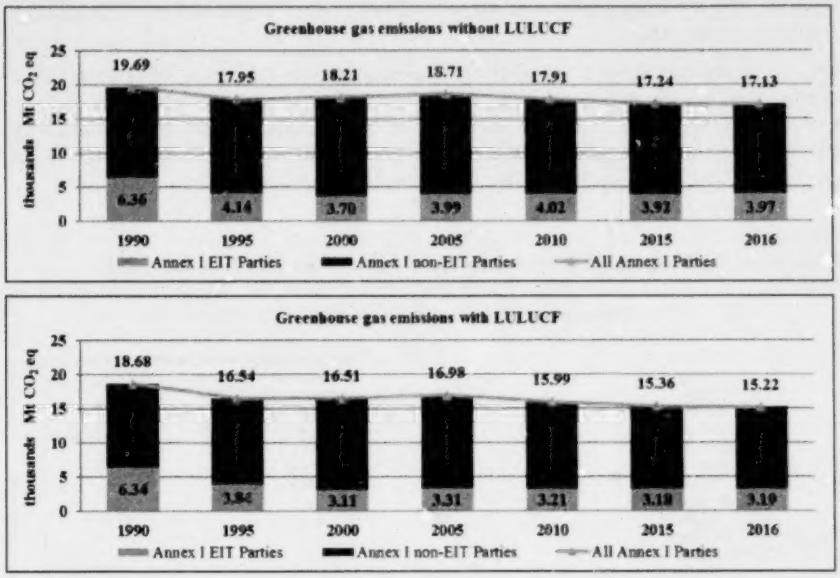
A. Total aggregate greenhouse gas emissions

11. From 1990 to 2016, total aggregate GHG emissions without emissions and removals from LULUCF for all Annex I Parties decreased by 13.0 per cent, from 19,694.24 to 17,127.42 Mt CO_2 eq. During the same period, total aggregate GHG emissions with LULUCF decreased by 18.5 per cent, from 18,675.37 to 15,219.27 Mt CO_2 eq. From 2000 to 2016, GHG emissions without and with LULUCF decreased by 5.9 and 7.8 per cent, respectively. Between 2015 and 2016, GHG emissions decreased by 0.6 per cent without LULUCF and by 0.9 per cent with LULUCF.

12. Figures 1 and 2 show the trends in total aggregate GHG emissions from 1990 to 2016 for all Annex I Parties taken together, for Annex I Parties with economies in transition (Annex I EIT Parties) and for Annex I Parties that do not have economies in transition (Annex I non-EIT Parties).

Figure 1

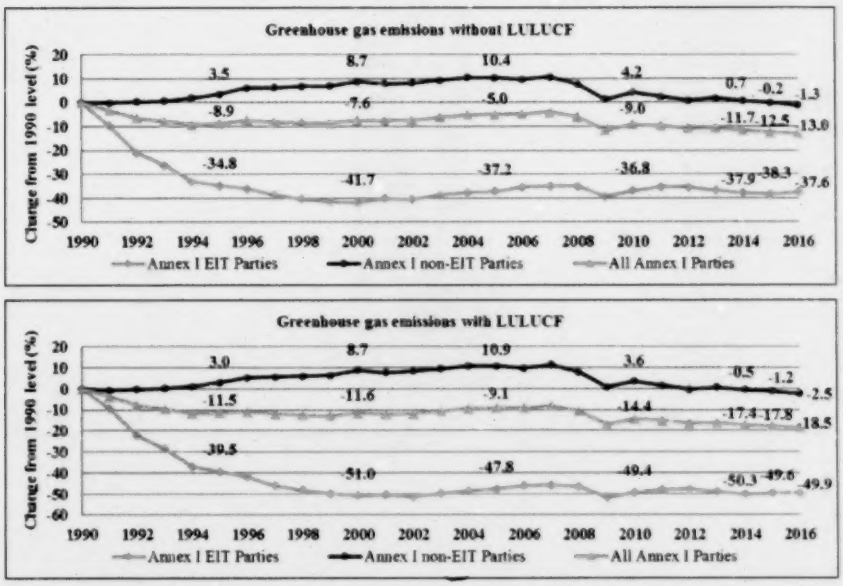
Greenhouse gas emissions of Annex I Parties, 1990, 1995, 2000, 2005, 2010, 2015 and 2016



Abbreviations: EIT = economy in transition, LULUCF = land use, land-use change and forestry.

Figure 2

Changes in greenhouse gas emissions of Annex I Parties, 1990–2016



Abbreviations: EIT = economy in transition, LULUCF = land use, land-use change and forestry.

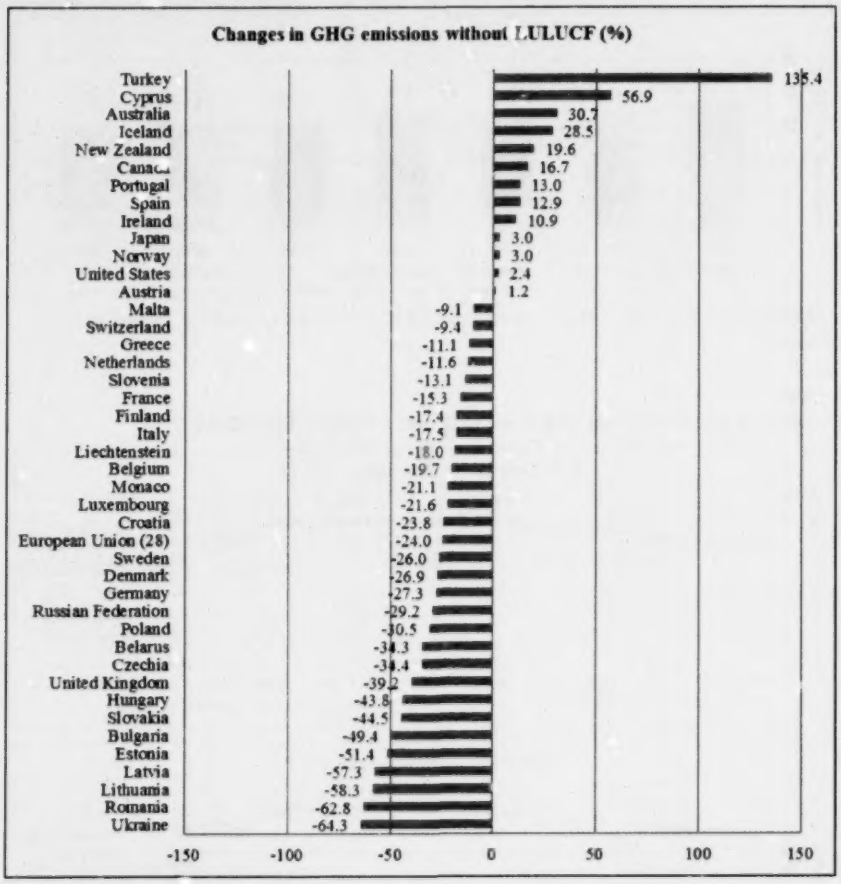
13. For Annex I EIT Parties, GHG emissions from 1990 to 2016 decreased by 37.6 per cent without LULUCF and by 49.6 per cent with LULUCF. From 2000 to 2016, GHG emissions without and with LULUCF increased by 7.1 and 2.8 per cent, respectively. Between 2015 and 2016, GHG emissions without and with LULUCF increased by 1.1 and 0.6 per cent, respectively.

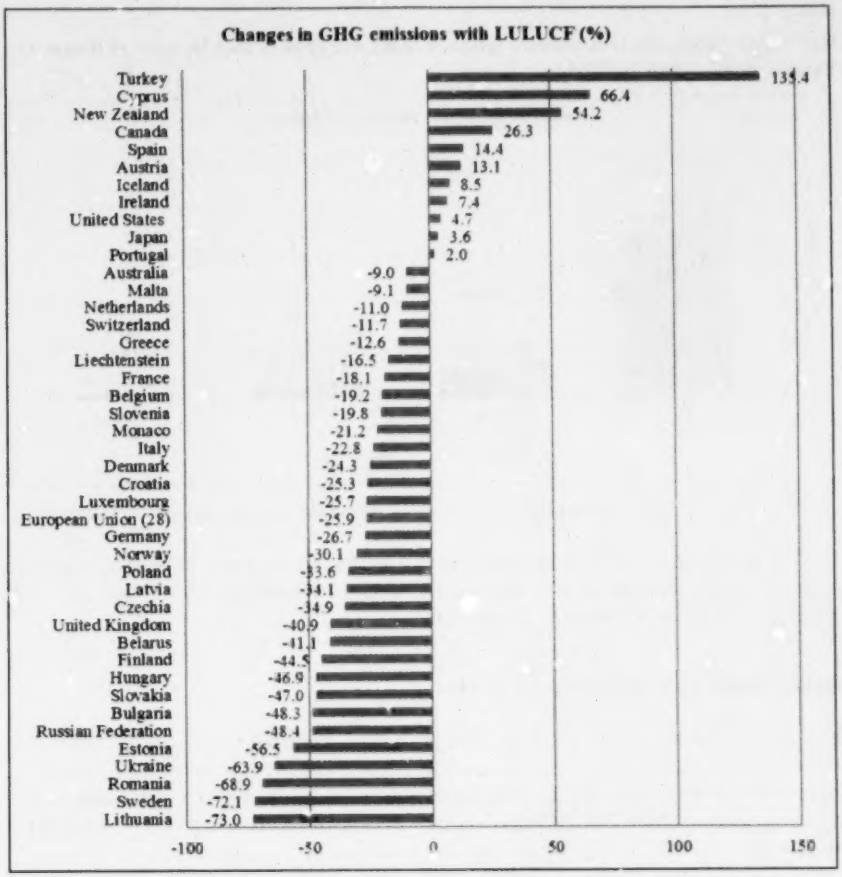
14. For Annex I non-EIT Parties, GHG emissions from 1990 to 2016 decreased by 1.3 per cent without LULUCF and by 2.5 per cent with LULUCF. From 2000 to 2016, GHG emissions without and with LULUCF decreased by 9.2 and 10.3 per cent, respectively. Between 2015 and 2016, GHG emissions showed a decrease of 1.1 per cent without LULUCF and 1.3 per cent with LULUCF.

15. The changes in total aggregate GHG emissions over the period 1990–2016 varied considerably among Parties (see figure 3). The largest decrease in emissions without LULUCF was in Ukraine (by 64.3 per cent), while the largest decrease in emissions with LULUCF was in Lithuania (by 73.0 per cent). The greatest increases in emissions without and with LULUCF were in Turkey (by 135.4 per cent in both cases).

Figure 3

Changes in total aggregate emissions of individual Annex I Parties, 1990–2016





Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

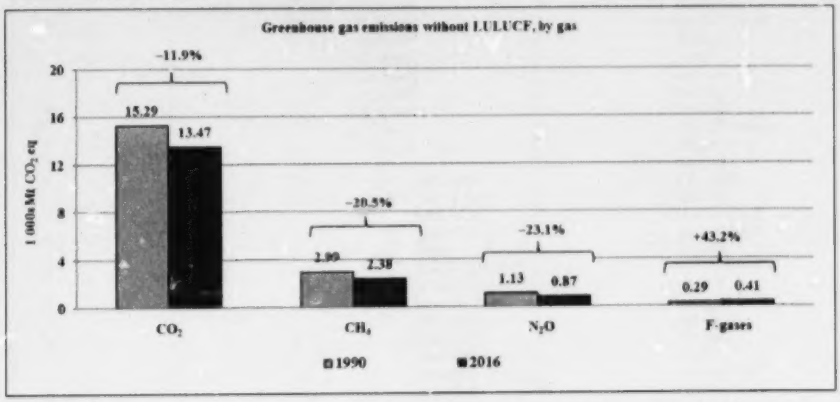
B. Greenhouse gas emissions by gas

16. Throughout the period 1990–2016 CO_2 accounted for the largest share of total emissions, contributing 77.6 per cent in 1990 and 78.7 per cent in 2016. CH_4 was the second-highest contributor to total GHG emissions (15.2 per cent in 1990 and 13.9 per cent in 2016), followed by N_2O (5.7 per cent in 1990 and 5.1 per cent in 2016). Emissions of F-gases contributed 1.5 per cent in 1990 and 2.4 per cent in 2016 to the total GHG emissions.

17. Figure 4 shows the contribution of each GHG to the total emissions without LULUCF for 1990 and 2016 and the changes in the total emissions of each GHG over the period 1990–2016. Emissions of CO_2, CH_4 and N_2O decreased, while emissions of F-gases increased by 43.2 per cent.

Figure 4

Greenhouse gas emissions without land use, land-use change and forestry of Annex I Parties by gas, 1990 and 2016



Abbreviations: F-gases = fluorinated gases, LULUCF = land use, land-use change and forestry.

18. Between 2015 and 2016, emissions of CO_2 and N_2O decreased by 0.9 and 0.7 per cent, respectively. During the same period emissions of CH_4 increased by 0.3 per cent and emissions of F-gases increased by 1.9 per cent.

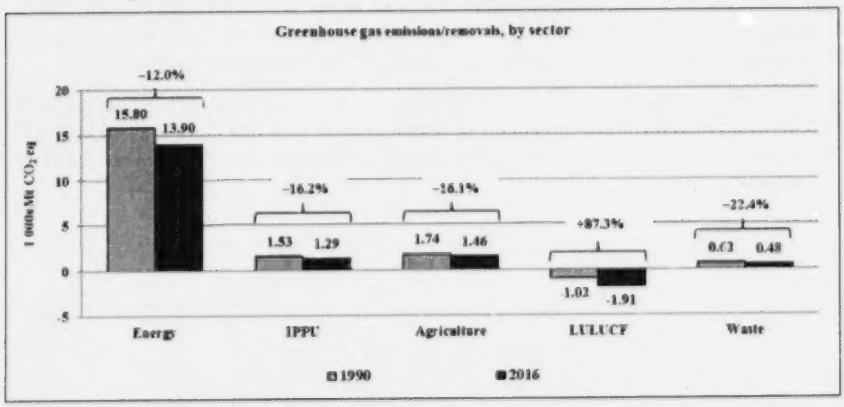
C. Greenhouse gas emissions by sector

19. From 1990 to 2016, emissions from all sectors decreased (see figure 5). The waste sector experienced the largest relative decrease in emissions (by 22.4 per cent), followed by the industrial processes and product use, agriculture and energy sectors. Over the same period net GHG removals from LULUCF increased by 87.3 per cent, from –1,018.88 to –1,908.16 Mt CO_2 eq.

20. Between 2015 and 2016, emissions from the energy, agriculture and waste sectors decreased by 0.8, 0.02 and 0.8 per cent, respectively, while emissions from the industrial processes and product use sector increased by 0.1 per cent. Net GHG removals from LULUCF increased by 1.7 per cent.

Figure 5

Greenhouse gas emissions and removals of Annex I Parties by sector, 1990 and 2016

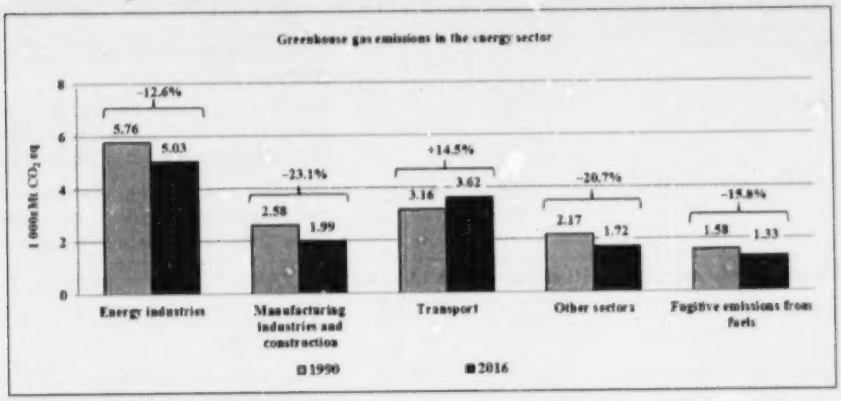


Note: The sector other is not included in this figure because its contribution to total greenhouse gas emissions was very small. The emissions from that sector decreased by 0.2 per cent between 1990 and 2016.

Abbreviations: IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry.

21. Within the energy sector, GHG emissions from 1990 to 2016 decreased in all subsectors except transport, where emissions increased by 14.5 per cent (see figure 6). The largest relative emission reduction occurred in manufacturing industries and construction (where emissions decreased by 23.1 per cent).

Figure 6
Greenhouse gas emissions of Annex I Parties in the energy sector, 1990 and 2016

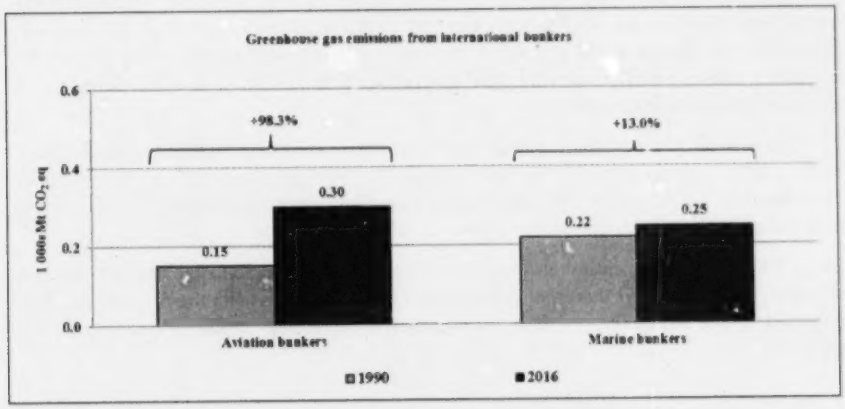


Note: The CO_2 transport and storage sector is not included in this figure because its contribution to the total greenhouse gas emissions was very small.

22. Between 2015 and 2016, emissions from energy industries, manufacturing industries and construction and other sectors decreased, whereas emissions from transport and fugitive emissions increased.

23. Over the period 1990–2016 emissions from international bunkers increased by 98.3 per cent for aviation and by 13.0 per cent for navigation (see figure 7).

Figure 7
Greenhouse gas emissions from international bunker fuels for Annex I Parties, 1990 and 2016



24. Between 2015 and 2016, emissions from international bunkers increased by 3.8 per cent for aviation and decreased by 0.1 per cent for navigation.

25. A comparison of the percentage changes in total aggregate GHG emissions from 1990 to the latest available year reported in Annex I Parties' 2017 and 2018 inventory submissions is presented in table 4, with explanations for the differences in the estimates.

Table 4

Comparison of the changes in the total aggregate greenhouse gas emissions of Annex I Parties reported in 2017 and 2018

	Estimate reported in 2017	*Estimate reported in 2018*	*Explanation of the difference between the estimates reported in 2017 and 2018*
Change in total aggregate GHG emissions without LULUCF from 1990 to the latest available year (%)			
All Annex I Parties	–11.91	–13.03	Combined impact of changes for individual Annex I Parties
Annex I EIT Parties	–37.82	–37.62	Increases in emissions between 2015 and 2016 and inventory recalculations, for example for Poland, Russian Federation and Ukraine
Annex I non-EIT Parties	0.51	–1.31	Decreases in emissions between 2015 and 2016 and inventory recalculations, for example for Japan, United Kingdom and United States
Change in total aggregate GHG emissions with LULUCF from 1990 to the latest available year (%)			
All Annex I Parties	–17.17	–18.51	Combined impact of changes for individual Annex I Parties
Annex I EIT Parties	–48.85	–49.63	Decreases in emissions between 2015 and 2016 and inventory recalculations, for example for Estonia, Latvia and Ukraine
Annex I non-EIT Parties	–0.75	–2.50	Decreases in emissions between 2015 and 2016 and inventory recalculations, for example for Japan, Sweden and United Kingdom

Abbreviations: EIT = economy in transition, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

D. Emission data for individual Annex I Parties

26. Tables 5–17 show detailed GHG data for individual Annex I Parties. Total aggregate GHG emissions without and with emissions and removals from LULUCF are provided in tables 5 and 6; emissions of CO_2, CH_4 and N_2O (without and with emissions and removals from LULUCF) are provided in tables 7–12; emissions of F-gases are provided in table 13; emissions and removals from LULUCF are provided in tables 14–16; and indirect CO_2 emissions are provided in table 17.

27. Blank cells in the tables denote that either data were not available or notation keys, such as "NO" (not occurring), "NE" (not estimated), "NA" (not applicable), "IE" (included elsewhere) or "C" (confidential), were used to report emission data. Negative values denote removals; positive values denote emissions.

28. The changes in emissions from 1990 to 2016 were calculated using exact (not rounded) values and may therefore differ from a ratio calculated with the rounded numbers provided in the tables. An en dash (–) signifies a percentage change exceeding 10,000 per cent.

Table 5

Total aggregate anthropogenic emissions of CO_2, CH_4, N_2O and F-gases without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	420 100	485 325	539 172	527 326	537 551	30.7
Austria	78 690	80 432	84 931	76 442	78 856	1.2
Belarus[a]	139 274	81 217	94 247	94 915	90 171	–34.3
Belgium	146 654	149 784	132 712	114 010	117 584	–19.7
Bulgaria[a, b]	116 753	59 569	60 548	58 582	61 748	–49.4
Canada	603 205	731 599	693 967	716 166	713 817	16.7
Croatia[a]	31 894	25 831	27 986	23 698	24 189	–23.8
Cyprus	5 591	8 271	9 419	8 271	8 328	56.9
Czechia[a]	197 476	149 003	139 572	126 567	127 621	–34.4
Denmark	70 599	71 388	64 492	52 129	49 618	–26.9
Estonia[a]	40 398	17 305	21 131	21 066	18 049	–51.4
European Union[c]	5 646 080	5 159 788	4 775 474	4 288 987	4 317 925	–24.0
Finland	71 143	70 044	75 462	58 855	55 347	–17.4
France	549 336	554 707	516 805	460 708	464 566	–15.3
Germany	1 251 635	1 044 969	942 783	902 676	906 752	–27.3
Greece	103 101	126 346	118 364	99 088	95 310	–11.1
Hungary[a, b]	109 438	73 395	65 344	57 942	61 010	–43.8
Iceland	3 634	4 067	4 879	4 665	4 749	28.5
Ireland	55 490	68 555	61 233	57 316	59 426	10.9
Italy	518 363	554 464	503 989	425 277	432 878	–17.5
Japan	1 266 694	1 372 245	1 300 302	1 359 669	1 321 061	3.0
Latvia[a]	26 430	10 513	12 374	11 233	11 318	–57.3
Liechtenstein	229	248	230	201	199	–18.0
Lithuania[a]	48 108	19 470	20 709	19 905	20 175	–58.3
Luxembourg	12 786	9 667	12 167	10 766	10 275	–21.6
Malta	2 102	2 811	2 968	2 909	2 225	–9.1
Monaco	100	108	86	80	82	–21.1
Netherlands	220 604	219 056	213 172	186 293	194 552	–11.6
New Zealand	65 815	76 102	78 672	80 877	80 703	19.6
Norway	51 697	54 598	55 136	53 246	53 871	3.0
Poland[a, b]	569 841	389 605	405 973	381 831	385 170	–30.5
Portugal	59 825	83 142	69 943	65 086	69 413	13.0
Romania[a, b]	302 631	140 734	122 182	115 371	116 211	–62.8
Russian Federation[a]	3 734 345	2 249 072	2 573 185	2 619 991	2 629 877	–29.2
Slovakia[a]	73 980	49 571	46 260	40 472	40 906	–44.5
Slovenia[a, b]	20 397	19 075	19 665	16 668	16 860	–13.1
Spain	287 656	385 572	355 882	324 326	335 809	12.9
Sweden	71 515	68 649	64 412	53 866	53 755	–26.0
Switzerland	53 196	52 195	54 137	48 359	47 813	–9.4
Turkey[d]	210 715	293 494	402 564	451 809	469 930	135.4
Ukraine[a]	947 253	420 515	407 263	362 043	319 012	–64.3
United Kingdom	799 915	716 797	615 517	529 160	511 274	–39.2
United States	6 355 634	7 216 645	6 922 946	6 763 141	6 638 133	2.4
Number of Parties showing a decrease in emissions by more than 1 per cent:						*30*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*13*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 6

Total aggregate anthropogenic emissions of CO_2, CH_4, N_2O and F-gases with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					Change from 1990
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	576 801	546 999	561 902	520 955	517 205	–9.0
Austria	66 708	64 067	79 053	71 716	74 410	13.1
Belarus[a]	118 169	47 974	54 121	64 807	62 761	–41.1
Belgium	144 220	147 894	131 176	112 809	116 402	–19.2
Bulgaria[a, b]	101 519	50 141	51 427	51 983	55 418	–48.3
Canada	535 510	690 468	662 068	683 249	687 430	26.3
Croatia[a]	25 281	18 427	20 975	17 405	18 818	–25.3
Cyprus	5 323	8 333	8 937	7 700	7 761	66.4
Czechia[a]	190 913	140 254	133 570	120 260	121 088	–34.9
Denmark	75 387	74 914	63 693	52 405	53 841	–24.3
Estonia[a]	38 854	13 934	19 145	19 401	15 793	–56.5
European Union[c]	5 386 300	4 844 478	4 448 675	3 969 005	4 000 271	–25.9
Finland	57 124	47 628	47 930	27 991	26 589	–44.5
France	523 489	532 863	479 254	418 298	423 737	–18.1
Germany	1 220 323	1 007 008	926 414	887 785	892 376	–26.7
Greece	100 982	124 410	115 325	98 957	91 618	–12.6
Hungary[a, b]	107 682	72 986	61 331	53 078	55 654	–46.9
Iceland	13 727	14 156	15 162	14 936	14 996	8.5
Ireland	61 889	74 866	66 267	62 580	64 498	7.4
Italy	515 321	538 809	473 349	391 852	397 552	–22.8
Japan	1 204 248	1 284 423	1 230 488	1 294 690	1 260 747	3.6
Latvia[a]	15 733	872	11 017	12 516	12 020	–34.1
Liechtenstein	235	272	249	217	208	–16.5
Lithuania[a]	43 046	10 912	11 727	13 633	14 031	–73.0
Luxembourg	12 834	8 965	12 014	10 309	9 868	–25.7
Malta	2 105	2 814	2 970	2 912	2 228	–9.1
Monaco	100	108	86	80	82	–21.2
Netherlands	226 658	225 122	219 302	192 882	201 209	–11.0
New Zealand	36 275	44 012	47 605	56 004	55 842	54.2
Norway	41 333	30 389	28 701	28 687	30 102	–30.1
Poland[a, b]	553 914	356 696	375 577	351 684	357 941	–33.6
Portugal	60 980	77 463	59 032	55 427	60 947	2.0
Romania[a, b]	283 995	117 875	99 170	89 886	92 860	–68.9
Russian Federation[a]	3 893 153	1 847 582	1 943 666	1 968 026	2 026 829	–48.4
Slovakia[a]	64 434	39 617	39 921	34 215	34 168	–47.0
Slovenia[a, b]	15 862	14 329	14 347	11 749	11 882	–19.8
Spain	248 307	342 602	315 432	282 784	293 802	14.4
Sweden	35 589	30 666	19 771	13 572	8 890	–72.1
Switzerland	52 466	56 954	52 592	47 051	46 406	–11.7
Turkey[d]	181 792	258 754	356 607	393 657	406 261	135.4
Ukraine[a]	889 283	375 125	370 178	341 952	296 942	–63.9
United Kingdom	797 787	708 924	601 077	514 750	496 186	–40.9
United States	5 536 014	6 463 882	6 206 014	6 022 765	5 942 941	4.7
Number of Parties showing a decrease in emissions by more than 1 per cent:						*32*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*11*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 7

Total anthropogenic CO_2 emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	278 424	350 195	406 753	393 464	402 995	48.5
Austria	62 292	66 262	72 383	64 253	66 704	8.2
Belarus[a]	104 135	55 458	63 862	63 780	58 966	–41.9
Belgium	120 484	126 795	113 582	96 391	100 229	–16.8
Bulgaria[a, b]	89 407	45 214	47 793	45 142	48 133	–49.3
Canada	463 880	572 531	555 460	568 008	565 577	20.3
Croatia[a]	23 442	19 816	21 245	17 851	17 997	–22.3
Cyprus	4 643	7 109	8 018	6 879	6 903	57.4
Czechia[a]	164 227	126 897	117 496	104 060	104 785	–35.1
Denmark	54 894	55 640	50 818	38 961	36 625	–30.0
Estonia[a]	37 069	15 362	19 015	18 904	15 891	–52.8
European Union[c]	4 472 076	4 177 014	3 938 606	3 476 890	3 510 586	–22.0
Finland	56 967	57 042	63 992	47 800	44 346	–15.9
France	400 837	416 961	393 476	339 786	344 390	–13.5
Germany	1 052 998	900 960	833 685	793 636	797 078	–23.9
Greece	83 375	102 982	97 343	78 656	74 962	–14.4
Hungary[a, b]	85 571	58 552	52 121	43 915	46 665	–44.4
Iceland	2 237	2 934	3 621	3 462	3 536	56.0
Ireland	32 878	45 194	41 680	36 682	38 444	21.4
Italy	439 944	470 768	424 873	348 476	355 483	–20.4
Japan	1 155 263	1 262 734	1 211 573	1 264 173	1 223 666	4.2
Latvia[a]	19 806	7 099	8 647	7 239	7 334	–63.3
Liechtenstein	199	217	191	161	159	–25.4
Lithuania[a]	35 787	11 788	13 713	12 875	13 142	–63.2
Luxembourg	11 812	8 673	11 154	9 758	9 260	–23.8
Malta	1 943	2 571	2 590	2 463	1 758	–26.9
Monaco	96	99	75	69	70	–29.9
Netherlands	162 441	171 936	182 180	157 347	165 030	1.9
New Zealand	25 454	32 359	35 011	35 610	35 837	35.4
Norway	35 704	42 216	45 823	43 953	44 664	23.3
Poland[a, b]	470 651	316 828	331 710	307 045	310 526	–31.8
Portugal	45 586	66 060	52 898	47 963	52 205	10.3
Romania[a, b]	209 596	93 538	83 551	77 160	77 788	–64.2
Russian Federation[a]	2 571 211	1 499 616	1 657 561	1 667 111	1 671 895	–35.1
Slovakia[a]	61 996	41 533	38 627	33 565	33 897	–45.2
Slovenia[a, b]	16 650	15 430	16 353	13 513	13 599	–13.5
Spain	231 895	311 926	283 877	255 196	271 727	12.5
Sweden	57 506	54 725	52 927	43 226	43 386	–26.0
Switzerland	44 162	43 612	45 045	39 238	38 739	–11.2
Turkey[d]	146 507	226 030	319 528	357 560	380 858	174.9
Ukraine[a]	705 832	279 538	293 519	256 584	223 580	–66.7
United Kingdom	601 343	566 933	511 979	438 269	422 194	–33.8
United States	5 121 264	6 000 606	5 701 076	5 568 759	5 420 804	3.7
Number of Parties showing a decrease in emissions by more than 1 per cent:						*29*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*14*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 8

Total anthropogenic CO_2 emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					Change from 1990
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	415 582	394 363	412 174	370 328	368 529	–9.9
Austria	50 142	49 739	66 349	59 372	62 100	25.7
Belarus[a]	83 008	22 188	23 715	33 649	31 443	–53.5
Belgium	118 039	124 854	111 942	95 045	98 892	–16.2
Bulgaria[a, b]	73 950	35 313	38 090	37 932	41 169	–48.5
Canada	394 234	528 847	522 195	533 307	537 011	34.0
Croatia[a]	16 788	12 206	14 131	11 457	12 501	–24.5
Cyprus	4 375	7 161	7 534	6 307	6 336	68.6
Czechia[a]	157 580	118 073	111 394	97 699	98 194	–35.8
Denmark	59 639	59 107	49 942	39 152	40 757	–26.6
Estonia[a]	35 523	11 987	17 011	17 217	13 614	–58.5
European Union[c]	4 191 429	3 839 812	3 591 995	3 137 520	3 173 087	–24.4
Finland	40 138	31 991	34 202	14 745	13 401	–53.5
France	370 770	390 237	351 546	293 174	299 313	–17.5
Germany	1 019 980	861 327	815 640	777 033	780 981	–23.0
Greece	81 187	100 812	94 271	78 500	71 244	–16.2
Hungary[a, b]	83 767	58 046	48 043	38 973	41 232	–48.4
Iceland	9 902	10 620	11 569	11 415	11 468	15.1
Ireland	38 668	50 874	45 804	41 214	42 776	14.2
Italy	434 595	453 502	393 234	314 121	319 310	–26.5
Japan	1 092 512	1 174 631	1 141 504	1 198 919	1 163 094	5.0
Latvia[a]	8 055	–3 603	6 286	7 470	6 977	–34.6
Liechtenstein	204	240	210	176	168	–23.6
Lithuania[a]	30 591	3 093	4 564	6 434	6 828	–85.2
Luxembourg	11 839	7 950	10 984	9 287	8 840	–28.2
Malta	1 946	2 574	2 592	2 466	1 761	–26.9
Monaco	96	99	75	69	70	–29.9
Netherlands	168 488	177 939	188 204	163 812	171 558	2.1
New Zealand	–4 383	–45	3 660	10 514	10 775	–362.4
Norway	24 890	17 515	18 861	18 864	20 365	–23.1
Poland[a, b]	454 509	283 503	300 651	275 776	282 164	–35.8
Portugal	45 863	59 554	41 288	37 900	43 232	–4.0
Romania[a, b]	189 719	68 954	58 696	49 832	52 418	–74.3
Russian Federation[a]	2 698 059	1 062 072	993 006	979 366	1 030 963	–63.0
Slovakia[a]	52 343	31 501	32 239	27 253	27 098	–48.3
Slovenia[a, b]	12 061	10 635	10 994	8 558	8 587	–22.3
Spain	191 864	268 139	243 033	213 327	229 215	14.6
Sweden	19 833	14 961	6 528	1 245	–3 140	–110.3
Switzerland	43 343	48 306	43 438	37 867	37 269	–14.0
Turkey[d]	117 527	191 161	273 417	299 230	317 003	184.6
Ukraine[a]	647 635	233 858	256 205	236 274	201 306	–66.5
United Kingdom	596 948	556 942	495 926	422 338	405 631	–36.0
United States	4 291 016	5 227 009	4 971 649	4 808 752	4 687 452	6.2
Number of Parties showing a decrease in emissions by more than 1 per cent:						*33*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*10*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 9

Total anthropogenic CH_4 emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	120 087	113 010	103 086	101 649	102 326	–14.4
Austria	10 405	8 434	7 255	6 709	6 632	–36.9
Belarus[a]	18 605	13 393	16 389	16 973	17 369	–8.5
Belgium	12 197	11 008	8 789	8 154	8 107	–34.1
Bulgaria[a, b]	16 838	10 149	7 736	7 390	7 340	–58.1
Canada	88 313	112 364	94 150	101 003	99 424	8.3
Croatia[a]	4 354	3 377	3 973	3 738	3 949	–9.3
Cyprus	653	782	819	806	822	30.4
Czechia[a]	23 613	15 383	14 479	13 925	13 993	–41.7
Denmark	7 668	7 958	7 399	7 011	6 942	–8.0
Estonia[a]	1 910	1 239	1 196	1 098	1 057	–44.6
European Union[c]	719 485	599 896	484 151	452 855	452 700	–37.7
Finland	7 746	6 614	5 373	4 920	4 874	–38.9
France	69 802	69 962	61 900	58 719	57 979	–18.8
Germany	120 227	87 678	58 144	55 806	55 602	–54.7
Greece	10 907	11 630	11 003	10 207	10 045	–11.3
Hungary[a, b]	12 538	8 916	8 018	7 558	7 534	–39.9
Iceland	543	602	636	599	599	9.5
Ireland	14 868	14 387	12 049	12 943	13 323	–7.8
Italy	48 236	50 737	46 769	43 132	43 133	–11.1
Japan	44 338	37 779	34 735	31 879	31 141	–30.6
Latvia[a]	3 539	1 849	1 836	1 956	1 871	–46.2
Liechtenstein	19	17	20	20	19	–0.1
Lithuania[a]	7 028	3 868	3 673	3 438	3 381	–53.3
Luxembourg	631	624	631	614	621	–1.0
Malta	106	174	180	171	178	80.4
Monaco	2	3	3	3	3	37.0
Netherlands	31 958	24 393	19 599	18 236	18 436	–41.8
New Zealand	32 277	35 080	33 815	34 625	34 079	4.4
Norway	5 788	5 673	5 353	5 270	5 163	–12.3
Poland[a, b]	69 721	48 678	47 496	45 987	46 659	–33.9
Portugal	10 392	12 293	11 529	11 145	11 086	6.6
Romania[a, b]	70 187	36 107	30 042	29 742	29 584	–59.3
Russian Federation[a]	922 030	611 795	800 251	832 011	838 809	–7.1
Slovakia[a]	7 192	5 350	4 605	4 229	4 352	–39.0
Slovenia[a, b]	2 583	2 497	2 262	2 043	2 107	–16.9
Spain	34 039	40 142	37 912	35 668	37 160	9.5
Sweden	7 602	7 018	5 441	4 923	4 818	–37.6
Switzerland	6 005	5 287	5 129	4 983	4 956	–18.3
Turkey[d]	42 183	43 484	52 462	58 130	52 393	29.7
Ukraine[a]	189 430	118 570	86 686	70 941	63 280	–64.1
United Kingdom	133 737	109 595	64 939	53 473	51 993	–61.1
United States	779 942	709 234	693 631	663 961	665 381	–15.7
Number of Parties showing a decrease in emissions by more than 1 per cent:						*33*
Number of Parties showing a change in emissions within 1 per cent:						*1*
Number of Parties showing an increase in emissions by more than 1 per cent:						*9*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 10
Total anthropogenic CH_4 emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	133 189	124 423	113 408	111 605	111 335	–15.4
Austria	10 430	8 458	7 279	6 733	6 656	–36.8
Belarus[a]	18 612	13 402	16 394	16 980	17 425	–8.5
Belgium	12 198	11 008	8 789	8 154	8 107	–34.1
Bulgaria[a, b]	16 839	10 284	7 751	7 392	7 352	–58.1
Canada	89 674	114 162	95 097	102 273	100 993	8.4
Croatia[a]	4 356	3 474	3 975	3 739	3 963	–9.1
Cyprus	653	789	821	806	822	32.2
Czechia[a]	23 658	15 425	14 536	13 955	14 025	–41.6
Denmark	7 684	7 991	7 448	7 066	6 999	–7.4
Estonia[a]	1 910	1 240	1 196	1 098	1 057	–44.6
European Union[c]	726 667	607 455	489 650	457 790	457 799	–37.6
Finland	9 285	7 962	6 351	5 841	5 793	–39.1
France	70 810	71 691	63 140	59 852	59 138	–18.3
Germany	121 102	88 550	59 012	56 671	56 469	–54.4
Greece	10 969	11 838	11 020	10 217	10 055	–11.5
Hungary[a, b]	12 563	8 942	8 027	7 575	7 552	–40.0
Iceland	2 905	2 935	2 896	2 841	2 838	–2.6
Ireland	15 330	14 820	12 602	13 346	13 723	–8.2
Italy	49 719	51 669	47 126	43 475	43 424	–13.0
Japan	44 423	37 858	34 807	31 969	31 214	–30.5
Latvia[a]	4 019	2 324	2 238	2 400	2 322	–41.2
Liechtenstein	19	17	20	20	19	–0.1
Lithuania[a]	7 031	3 872	3 675	3 441	3 383	–53.4
Luxembourg	631	624	631	614	621	–1.0
Malta	106	174	180	171	178	80.4
Monaco	2	3	3	3	3	37.0
Netherlands	31 958	24 393	19 600	18 236	18 436	–41.8
New Zealand	32 395	35 192	33 946	34 731	34 176	4.3
Norway	5 928	5 817	5 501	5 418	5 311	–11.8
Poland[a, b]	69 765	48 711	47 530	46 024	46 695	–33.8
Portugal	10 693	12 627	11 824	11 192	11 227	7.8
Romania[a, b]	70 187	36 111	30 042	29 743	29 585	–59.3
Russian Federation[a]	943 377	632 266	823 152	854 897	861 668	–6.8
Slovakia[a]	7 202	5 375	4 623	4 250	4 375	–38.9
Slovenia[a, b]	2 584	2 497	2 263	2 043	2 107	–16.9
Spain	34 353	40 435	38 000	35 747	37 340	8.9
Sweden	8 071	7 493	5 895	5 392	5 258	–35.8
Switzerland	6 035	5 302	5 142	4 996	4 969	–18.4
Turkey[d]	42 204	43 526	52 467	58 135	52 398	29.7
Ukraine[a]	189 441	118 576	86 717	70 976	63 331	–64.1
United Kingdom	133 753	109 625	64 975	53 505	52 014	–61.1
United States	786 664	721 342	700 569	675 168	687 786	–13.6
Number of Parties showing a decrease in emissions by more than 1 per cent:						*34*
Number of Parties showing a change in emissions within 1 per cent:						*1*
Number of Parties showing an increase in emissions by more than 1 per cent:						*8*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 11
Total anthropogenic N_2O emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					Change from 1990
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	15 337	19 008	19 490	19 644	19 074	26.6
Austria	4 337	4 349	3 391	3 520	3 527	–16.7
Belarus[a]	16 535	12 366	13 994	14 159	13 834	–15.3
Belgium	10 159	10 260	7 586	6 183	6 022	–43.4
Bulgaria[a, b]	10 505	4 166	4 337	4 925	5 035	–49.5
Canada	39 258	36 061	34 283	35 619	36 378	–5.5
Croatia[a]	2 847	2 479	2 380	1 688	1 818	–40.1
Cyprus	295	351	370	317	326	13.6
Czechia[a]	9 551	6 278	5 457	5 800	5 835	–36.5
Denmark	7 995	6 998	5 246	5 268	5 252	–32.9
Estonia[a]	1 419	622	743	845	876	–41.0
European Union[c]	382 608	302 950	237 749	234 179	233 824	–39.2
Finland	6 377	5 664	4 700	4 660	4 671	–27.4
France	66 857	55 760	42 525	42 173	41 933	–38.5
Germany	65 024	43 087	36 600	38 273	38 809	–41.6
Greece	7 443	6 346	5 489	4 319	4 259	–42.2
Hungary[a, b]	10 952	5 336	3 808	4 232	4 312	–59.0
Iceland	358	337	300	322	303	–16.2
Ireland	7 709	8 019	6 492	6 508	6 518	–13.8
Italy	26 423	28 374	19 057	17 627	17 636	–32.1
Japan	31 739	29 690	22 476	21 302	20 979	–34.9
Latvia[a]	3 085	1 549	1 718	1 823	1 883	–39.4
Liechtenstein	11	10	10	10	10	–11.2
Lithuania[a]	5 292	3 791	3 059	3 134	3 119	–43.5
Luxembourg	342	339	322	319	318	–4.8
Malta	53	58	51	43	42	–20.8
Monaco	2	3	4	4	3	62.3
Netherlands	17 730	15 802	8 248	8 197	8 470	–53.7
New Zealand	7 154	8 329	8 625	9 127	9 151	27.6
Norway	4 211	3 917	2 588	2 560	2 595	–40.2
Poland[a, b]	29 322	22 533	19 708	19 755	18 925	–33.6
Portugal	3 847	4 348	3 369	3 190	3 175	–18.0
Romania[a, b]	18 401	9 334	7 537	7 037	7 143	–62.0
Russian Federation[a]	188 671	100 304	97 294	91 805	92 170	–51.7
Slovakia[a]	4 478	2 555	2 386	1 999	1 899	–56.0
Slovenia[a, b]	921	957	762	751	774	–15.2
Spain	17 455	20 279	16 803	16 641	16 751	–5.9
Sweden	5 730	5 691	4 803	4 680	4 566	–19.6
Switzerland	2 775	2 469	2 426	2 329	2 285	–17.1
Turkey[d]	21 399	22 596	25 890	29 298	29 770	49.4
Ukraine[a]	51 755	22 275	26 278	33 653	31 357	–33.2
United Kingdom	47 513	27 970	21 098	20 571	20 225	–57.7
United States	354 754	358 505	366 756	361 152	379 575	4.2
Number of Parties showing a decrease in emissions by more than 1 per cent:						*37*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*6*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 12
Total anthropogenic N_2O emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	21 778	25 100	26 477	26 454	24 186	11.5
Austria	4 480	4 484	3 524	3 652	3 661	–16.3
Belarus[a]	16 549	12 384	14 010	14 175	13 891	–15.3
Belgium	10 170	10 311	7 690	6 328	6 177	–41.9
Bulgaria[a, b]	10 726	4 504	4 904	5 535	5 656	–44.8
Canada	39 847	36 816	34 702	36 134	36 987	–5.4
Croatia[a]	2 886	2 588	2 482	1 789	1 929	–37.1
Cyprus	295	353	370	317	326	15.0
Czechia[a]	9 591	6 312	5 501	5 826	5 862	–36.5
Denmark	8 022	7 025	5 273	5 298	5 286	–32.7
Estonia[a]	1 421	625	760	865	897	–39.5
European Union[c]	396 293	317 283	252 062	248 633	248 570	–37.5
Finland	7 648	6 950	5 981	5 930	5 939	–22.8
France	70 069	58 911	45 664	45 243	45 022	–36.9
Germany	65 855	43 888	37 409	39 120	39 663	–41.1
Greece	7 450	6 373	5 507	4 335	4 274	–42.1
Hungary[a, b]	10 974	5 406	3 865	4 293	4 370	–58.7
Iceland	424	406	375	399	380	–11.1
Ireland	7 855	8 217	6 849	6 837	6 857	–11.3
Italy	27 246	29 053	19 699	18 213	18 192	–31.3
Japan	31 960	29 892	22 659	21 487	21 164	–34.7
Latvia[a]	3 659	2 136	2 320	2 431	2 491	–32.2
Liechtenstein	11	10	10	10	10	–9.9
Lithuania[a]	5 424	3 925	3 225	3 301	3 287	–41.6
Luxembourg	363	360	339	333	331	–6.9
Malta	53	58	51	43	42	–20.8
Monaco	2	3	4	4	3	61.9
Netherlands	17 735	15 864	8 354	8 320	8 599	–52.9
New Zealand	7 333	8 532	8 778	9 244	9 255	25.7
Norway	4 521	4 264	2 968	2 941	2 978	–35.6
Poland[a, b]	29 492	22 916	20 338	20 839	20 021	–29.8
Portugal	4 424	4 841	3 772	3 548	3 543	–19.2
Romania[a, b]	19 642	11 057	9 379	8 880	9 161	–54.1
Russian Federation[a]	199 283	115 887	109 429	104 698	107 194	–47.6
Slovakia[a]	4 574	2 609	2 416	2 033	1 937	–56.1
Slovenia[a, b]	973	1 006	803	786	808	–16.2
Spain	17 823	20 802	17 110	16 889	17 076	–6.2
Sweden	7 009	6 996	6 107	5 898	5 787	–17.0
Switzerland	2 834	2 519	2 475	2 379	2 334	–17.0
Turkey[d]	21 437	22 685	26 039	29 470	29 951	50.0
Ukraine[a]	51 971	22 558	26 476	33 837	31 511	–33.2
United Kingdom	49 764	30 058	22 676	22 060	21 679	–56.7
United States	358 661	367 231	372 313	369 576	395 331	7.4
Number of Parties showing a decrease in emissions by more than 1 per cent:						*37*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*6*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 13
Total aggregate anthropogenic emissions of F-gases, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	6 252	3 113	9 843	12 568	13 155	117.1
Austria	1 656	1 387	1 901	1 960	1 993	26.2
Belarus[a]			2	2	3	
Belgium	3 813	1 722	2 755	3 282	3 226	–3.1
Bulgaria[a, b]	3	40	682	1 125	1 240	–
Canada	11 755	10 643	10 074	11 535	12 438	12.7
Croatia[a]	1 251	160	388	421	425	–65.9
Cyprus		29	212	269	277	–
Czechia[a]	84	444	2 140	2 781	3 008	3 703.1
Denmark	42	790	1 029	890	799	1 710.0
Estonia[a]		82	177	220	225	
European Union[c]	71 911	79 928	114 968	125 063	120 815	69.0
Finland	53	724	1 397	1 474	1 456	2 638.0
France	11 840	12 024	18 904	20 030	20 264	73.6
Germany	13 386	13 244	14 354	14 961	15 263	14.3
Greece	1 376	5 388	4 528	5 906	6 044	354.7
Hungary[a, b]	377	591	1 397	2 237	2 500	395.6
Iceland	496	194	322	282	310	–42.6
Ireland	35	955	1 012	1 183	1 142	3 496.9
Italy	3 761	4 585	13 291	16 042	16 626	344.5
Japan	35 354	42 042	31 518	42 315	45 274	38.0
Latvia[a]		15	173	215	230	
Liechtenstein		4	10	11	11	–
Lithuania[a]		23	263	458	533	
Luxembourg	1	32	60	76	76	8 459.4
Malta		8	147	231	247	–
Monaco		4	4	4	6	2 565.0
Netherlands	8 476	6 926	3 144	2 513	2 616	–68.1
New Zealand	930	334	1 221	1 515	1 636	56.2
Norway	5 993	2 793	1 372	1 465	1 449	–73.1
Poland[a, b]	147	1 566	7 059	9 045	9 060	6 044.5
Portugal		441	2 148	2 788	2 946	
Romania[a, b]	4 447	1 754	1 052	1 431	1 696	–56.2
Russian Federation[a]	52 433	37 357	18 078	29 064	27 003	–45.9
Slovakia[a]	315	133	642	679	758	117.7
Slovenia[a, b]	243	192	287	361	380	60.9
Spain	4 268	13 225	17 289	16 821	10 172	135.1
Sweden	676	1 216	1 241	1 037	985	43.9
Switzerland	254	828	1 537	1 810	1 834	604.4
Turkey[d]	625	1 384	4 684	6 821	6 910	950.4
Ukraine[a]	236	132	780	865	795	287.2
United Kingdom	17 323	12 300	17 500	16 848	16 862	–6.7
United States	99 673	148 301	161 483	169 268	172 373	74.0
Number of Parties showing a decrease in emissions by more than 1 per cent:						*8*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*26*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 14

Net anthropogenic CO_2 emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					Change from 1990
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	137 157	44 169	5 422	–23 136	–34 466	–128.4
Austria	–12 150	–16 522	–6 035	–4 882	–4 603	–64.1
Belarus[a]	–21 127	–33 271	–40 148	–30 131	–27 523	3.8
Belgium	–2 445	–1 941	–1 640	–1 346	–1 337	–46.4
Bulgaria[a, b]	–15 457	–9 901	–9 703	–7 211	–6 964	–53.6
Canada	–69 646	–43 683	–33 264	–34 701	–28 565	–56.9
Croatia[a]	–6 654	–7 610	–7 114	–6 394	–5 496	–16.7
Cyprus	–268	52	–484	–571	–567	–125.0
Czechia[a]	–6 647	–8 824	–6 102	–6 361	–6 591	–18.8
Denmark	4 745	3 467	–876	192	4 131	12.1
Estonia[a]	–1 546	–3 375	–2 004	–1 687	–2 277	77.7
European Union[c]	–280 647	–337 202	–346 611	–339 371	–337 499	14.8
Finland	–16 829	–25 050	–29 790	–33 054	–30 945	73.8
France	–30 066	–26 725	–41 931	–46 612	–45 077	36.1
Germany	–33 018	–39 633	–18 045	–16 603	–16 097	–50.9
Greece	–2 188	–2 171	–3 072	–156	–3 718	53.4
Hungary[a, b]	–1 804	–505	–4 078	–4 942	–5 433	140.0
Iceland	7 665	7 686	7 948	7 953	7 931	3.2
Ireland	5 790	5 680	4 125	4 532	4 333	–26.6
Italy	–5 349	–17 266	–31 639	–34 355	–36 173	481.0
Japan	–62 752	–88 103	–70 069	–65 254	–60 572	–9.1
Latvia[a]	–11 751	–10 702	–2 361	231	–357	–83.0
Liechtenstein	5	23	19	15	9	45.0
Lithuania[a]	–5 197	–8 695	–9 149	–6 441	–6 313	66.0
Luxembourg	27	–723	–170	–471	–420	–1 964.2
Malta	3	3	2	3	3	15.1
Monaco						72.7
Netherlands	6 048	6 003	6 025	6 465	6 528	8.2
New Zealand	–29 836	–32 404	–31 351	–25 096	–25 062	–23.0
Norway	–10 814	–24 701	–26 962	–25 089	–24 299	130.2
Poland[a, b]	–16 141	–33 325	–31 059	–31 269	–28 362	81.0
Portugal	278	–6 505	–11 609	–10 063	–8 973	–2 353.9
Romania[a, b]	–19 876	–24 585	–24 855	–27 529	–25 370	32.4
Russian Federation[a]	126 849	–437 544	–664 555	–687 745	–640 932	–628.9
Slovakia[a]	–9 652	–10 033	–6 387	–6 312	–6 799	–28.4
Slovenia[a, b]	–4 589	–4 795	–5 358	–4 955	–5 012	9.5
Spain	–40 031	–43 787	–40 844	–41 869	–42 513	2.9
Sweden	–37 674	–39 764	–46 400	–41 981	–46 525	18.4
Switzerland	–818	4 694	–1 608	–1 371	–1 469	136.7
Turkey[d]	–28 981	–34 869	–46 111	–58 329	–63 855	135.6
Ukraine[a]	–58 197	–45 680	–37 314	–20 310	–22 274	–68.8
United Kingdom	–4 395	–9 991	–16 054	–15 931	–16 562	264.5
United States	–830 249	–773 597	–729 427	–760 007	–733 352	–9.1
Number of Parties showing a decrease in emissions by more than 1 per cent:						*19*
Number of Parties showing a change in emissions within 1 per cent:						*0*
Number of Parties showing an increase in emissions by more than 1 per cent:						*24*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 15

Anthropogenic CH_4 emissions from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					*Change from 1990*
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	13 101	11 413	10 322	9 956	9 009	–24.6
Austria	24	24	24	24	24	–1.7
Belarus[a]	8	9	5	7	56	–41.0
Belgium	0.57	0.002				
Bulgaria[a, b]	1	135	15	2	13	1 274.8
Canada	1 361	1 799	947	1 270	1 569	15.8
Croatia[a]	1	97	2		14	624.7
Cyprus	0.05	7.20	1.13	0.41	0.14	–
Czechia[a]	44	41	57	29	32	–25.6
Denmark	16	33	49	55	57	268.0
Estonia[a]	0.35	1.28	0.11	0.10	0.06	–81.4
European Union[c]	7 181	7 559	5 499	4 935	5 099	–22.4
Finland	1 538	1 347	977	921	919	–40.2
France	1 008	1 729	1 240	1 133	1 159	20.2
Germany	876	871	868	865	867	–1.2
Greece	63	208	16	9	11	–49.5
Hungary[a, b]	25	26	9	17	18	–63.5
Iceland	2 362	2 334	2 260	2 241	2 239	–5.4
Ireland	462	434	553	403	400	–18.9
Italy	1 483	933	357	344	291	–73.3
Japan	86	79	72	90	73	–21.8
Latvia[a]	480	475	402	434	451	–3.9
Liechtenstein						
Lithuania[a]	3	4	1	3	1	–77.1
Luxembourg						
Malta						
Monaco						
Netherlands	0.24	0.28	0.31	0.32	0.33	35.0
New Zealand	118	112	131	106	97	–15.4
Norway	139	145	147	148	148	6.5
Poland[a, b]	44	33	34	38	36	1.5
Portugal	300	334	295	47	141	49.9
Romania[a, b]	0.09	3.33	0.19	1.10	1.10	1 179.2
Russian Federation[a]	21 348	20 471	22 901	22 887	22 859	7.4
Slovakia[a]	10	25	18	21	23	89.1
Slovenia[a, b]	1.20	0.47	0.25	0.07	0.24	1.0
Spain	314	292	88	79	180	–48.5
Sweden	469	475	455	469	439	–6.3
Switzerland	29	15	13	13	13	–45.7
Turkey[d]	20	41	6	5	5	–20.5
Ukraine[a]	11	7	31	34	51	–59.4
United Kingdom	16	30	35	32	21	116.3
United States	6 722	12 108	6 938	11 207	22 404	233.0
Number of Parties showing a decrease in emissions by more than 1 per cent:						*22*
Number of Parties showing a change in emissions within 1 per cent:						*1*
Number of Parties showing an increase in emissions by more than 1 per cent:						*14*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 16
Anthropogenic N_2O emissions from land use, land-use change and forestry, 1990, 2000, 2010, 2015 and 2016

	kt CO_2 eq					Change from 1990
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia	6 441	6 092	6 987	6 810	5 111	–24.2
Austria	144	134	133	132	134	–5.9
Belarus[a]	14	19	16	16	57	13.0
Belgium	11	51	104	145	155	1 364.0
Bulgaria[a, b]	221	338	567	610	621	180.9
Canada	590	754	419	514	609	2.7
Croatia[a]	39	109	102	101	111	179.3
Cyprus	0.02	2.53	0.39	0.14	0.05	–
Czechia[a]	40	34	43	25	27	–31.5
Denmark	27	27	27	30	34	21.5
Estonia[a]	2	3	18	21	21	1 296.0
European Union[c]	13 685	14 333	14 313	14 454	14 746	10.5
Finland	1 271	1 286	1 281	1 270	1 267	0.0
France	3 211	3 151	3 139	3 070	3 089	–2.7
Germany	830	801	809	847	855	3.6
Greece	6	27	17	16	16	162.6
Hungary[a, b]	22	70	56	61	58	133.4
Iceland	66	69	75	77	77	16.5
Ireland	146	198	357	328	339	118.9
Italy	823	679	642	586	556	–8.2
Japan	220	202	183	185	185	–15.8
Latvia[a]	574	587	602	608	608	6.1
Liechtenstein						34.7
Lithuania[a]	132	134	166	166	168	37.2
Luxembourg	21	21	17	14	13	–41.3
Malta						
Monaco	0.01	0.01	0.01	0.01	0.01	–0.2
Netherlands	6	62	106	123	129	2 240.7
New Zealand	179	203	153	117	104	–48.9
Norway	311	347	380	381	382	25.8
Poland[a, b]	170	383	630	1 085	1 097	617.9
Portugal	577	493	404	358	367	–27.4
Romania[a, b]	1 241	1 723	1 843	1 843	2 018	62.6
Russian Federation[a]	10 612	15 584	12 135	12 893	15 024	27.0
Slovakia[a]	97	55	30	34	38	–63.4
Slovenia[a, b]	52	49	41	35	34	–34.9
Spain	368	524	307	248	325	–20.1
Sweden	1 279	1 306	1 304	1 218	1 221	–5.3
Switzerland	59	50	49	50	49	–14.0
Turkey[d]	38	88	149	173	181	416.2
Ukraine[a]	216	283	198	184	153	–39.6
United Kingdom	2 251	2 088	1 578	1 489	1 454	–35.9
United States	3 907	8 726	5 557	8 424	15 757	301.6
Number of Parties showing a decrease in emissions by more than 1 per cent:						*16*
Number of Parties showing a change in emissions within 1 per cent:						*2*
Number of Parties showing an increase in emissions by more than 1 per cent:						*23*

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 17
Indirect CO_2 emissions, 1990, 2000 2010, 2015 and 2016

	kt CO_2 eq					Change from 1990
Party	*1990*	*2000*	*2010*	*2015*	*2016*	*to 2016 (%)*
Australia						
Austria						
Belarus[a]						
Belgium						
Bulgaria[a, b]						
Canada	806	966	634	590	607	-28.1
Croatia[a]						
Cyprus						
Czechia[a]	2 122	1 158	963	801	799	-63.9
Denmark	1 163	797	459	315	302	-75.3
Estonia[a]						
European Union[c]	4 281	2 658	1 962	1 576	1 563	-65.2
Finland	166	105	70	54	53	-68.2
France						
Germany						
Greece						
Hungary[a, b]						
Iceland						
Ireland						
Italy						
Japan	5 370	4 132	2 356	2 123	2 103	-60.9
Latvia[a]	40	25	16	20	17	-56.2
Liechtenstein						
Lithuania[a]						
Luxembourg						
Malta						
Monaco						
Netherlands	683	353	256	230	227	-68.9
New Zealand						
Norway						
Poland[a, b]						
Portugal	106	221	198	157	165	45.1
Romania[a, b]						
Russian Federation[a]						
Slovakia[a]						
Slovenia[a, b]						
Spain						
Sweden						
Switzerland	403	180	117	112	109	-73.2
Turkey[d]						
Ukraine[a]						
United Kingdom						
United States						

Number of Parties showing a decrease in emissions by more than 1 per cent:	*9*
Number of Parties showing a change in emissions within 1 per cent:	*0*
Number of Parties showing an increase in emissions by more than 1 per cent:	*1*

Note: In accordance with decision 24/CP.19, Annex I Parties may report indirect CO_2 from the atmospheric oxidation of CH_4, carbon monoxide and non-methane volatile organic compounds. Ten Parties voluntarily reported indirect CO_2 emissions in their 2018 inventory submissions.

[a] Party with economy in transition.

[b] Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

[c] Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

[d] Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

United Nations

Framework Convention on Climate Change

FCCC/SBI/2018/18

Distr.: General
28 September 2018

Original: English

Subsidiary Body for Implementation
Forty-ninth session
Katowice, 2–8 December 2018

Item X of the provisional agenda

The 34th meeting of the Least Developed Countries Expert Group

Report by the secretariat

Summary

The 34th meeting of the Least Developed Countries Expert Group was held in Freetown, Sierra Leone, from 21 to 24 August 2018. At the meeting, the Group discussed progress on the implementation of its rolling work programme for 2018–2019. The meeting included discussions with the Global Environment Facility and its agencies on their continued provision of support to the least developed countries (LDCs) for the process to formulate and implement national adaptation plans and the implementation of the LDC work programme, which includes the preparation and implementation of national adaptation programmes of action. The meeting included discussions with representatives of other relevant organizations on collaboration in providing support to the LDCs. It also provided a venue for interaction with officials from the Government of Sierra Leone on their work on adaptation.

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I. Mandate

1. The Conference of the Parties (COP), at its twenty-first session, extended the mandate of the Least Developed Countries Expert Group (LEG) under its current terms of reference[1] to cover the period 2016–2020, and mandated the LEG to undertake a number of additional activities,[2] including supporting the implementation of the Paris Agreement.[3]

2. Accordingly, the LEG is mandated to develop a two-year rolling work programme for consideration by the Subsidiary Body for Implementation (SBI) at its first sessional meeting of each year and to report on its work to the SBI at each of its sessions.[4]

II. Summary of the 34th meeting of the Least Developed Countries Expert Group

A. Proceedings

3. The 34th meeting of the LEG was held in Freetown, Sierra Leone, from 21 to 24 August 2018. The meeting was opened by the deputy Minister of Transport and Aviation of the Government of Sierra Leone, Mr. Sadic Sillah.

4. The LEG extended invitations to the Green Climate Fund (GCF), the Global Environment Facility (GEF) and its agencies, and other relevant organizations, to participate in the meeting in order to discuss the provision of support to the least developed countries (LDCs). Representatives of the following entities took part in the meeting: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), the Food and Agriculture Organization of the United Nations (FAO), the GEF secretariat, the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). The GCF secretariat and the International Institute for Sustainable Development serving as the secretariat of the NAP Global Network provided written updates to the meeting. The LEG also invited an expert on measuring progress on adaptation to present and take part in the discussions on monitoring and assessing progress made on national adaptation plans (NAPs).

5. The meeting included interactions with the Government of Sierra Leone to discuss the country's progress, challenges, gaps and needs in the process to formulate and implement NAPs.

6. The LEG elected Ms. Hana Hamadalla Mohamed (Sudan) as Vice-Chair. The list of current members of the LEG is included in the annex.

7. The LEG took note of the following members who are representing it in its ongoing collaborative activities with other bodies under the Convention:

(a) Ms. Beth Lavender (Canada) and Mr. Aderito Santana (Sao Tome and Principe) in the Adaptation Committee (AC) NAP task force;

(b) Mr. Fredrick Manyika (United Republic of Tanzania) in the work of the AC on the technical examination process on adaptation;

(c) Mr. Idrissa Semde (Burkina Faso) in the task force on displacement of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(d) Mr. Ewin Künzi (Austria) in collaboration with the Technology Executive Committee;

[1] Decisions 29/CP.7, 7/CP.9, 4/CP.11, 8/CP.13, 6/CP.16, 5/CP.17, 12/CP.18 and 3/CP.20.
[2] Decision 19/CP.21, paragraphs 1–3.
[3] Decision 1/CP.21, paragraphs 41 and 45.
[4] Decision 6/CP.16, paragraph 3.

(e) Ms. Mohamed in the work of the Paris Committee on Capacity-building;

(f) Ms. Mery Yaou (Togo) in the work of the Nairobi work programme on impacts, vulnerability and adaptation to climate change (NWP).

B. Status of the process to formulate and implement national adaptation plans

1. Progress made by developing countries in the process to formulate and implement national adaptation plans

8. The LEG noted that most developing countries are undertaking various activities in order to formulate their NAP. It noted that, as at 21 September 2018, 11 developing countries had completed and submitted their NAPs on NAP Central:[5] Brazil, Burkina Faso, Cameroon, Chile, Colombia, Kenya, Saint Lucia, Sri Lanka, State of Palestine, Sudan and Togo. One developing country (Fiji) submitted its NAP framework.

9. The LEG also noted that none of those countries had as yet applied for funding from the GCF for implementing prioritized policies, projects or programmes identified in their NAPs.

2. Progress made in relation to support provided

10. The LEG took note of the information supplied at the meeting on support provided for the process to formulate and implement NAPs between March and August 2018,[6] as summarized in paragraphs 11–16 below.

11. The LEG, in collaboration with the AC, convened a meeting of Party experts to assess progress in the process to formulate and implement NAPs from 7 to 9 February 2018, in Sao Tome, Sao Tome and Principe,[7] and conducted the NAP Expo from 4 to 6 April 2018, in Sharm El Sheikh, Egypt.[8] The LEG also advanced its work on the technical guidance and support for the process to formulate and implement NAPs (see chapter III.A below).

12. Since March 2018, the National Adaptation Plan Global Support Programme (NAP-GSP), jointly administered by UNDP and UNEP, has provided one-on-one technical support to four more LDCs, for a total of 21 LDCs being supported with this modality under the NAP-GSP since 2013. [9] The support included stocktaking exercises, stakeholder consultations, development of NAP road maps and training on specific topics. A regional training workshop for the Pacific region was conducted from 28 to 31 May 2018 in Nadi, Fiji, focusing on the appraisal and prioritization of options for adaptation planning. Four more regional training workshops are planned to take place in 2018–2019: two in September 2018 for Africa, focusing on climate finance, and another two in October 2018, one for Asia and one for Latin America and the Caribbean. The programme has also compiled NAP case studies from Bangladesh, Benin, Bhutan, the Democratic Republic of the Congo, Gambia, Haiti, Liberia, Malawi, Myanmar, Niger and Senegal to facilitate the exchange of experience.

13. From March to August 2018, UNDP supported three more LDCs (Benin, Haiti and Madagascar) in developing and submitting their funding proposals to the GCF.

14. FAO continued to support 7 global and regional programmes and 10 national programmes, covering 10 LDCs and 22 developing countries in Africa, Asia, Europe and Latin America and the Caribbean on activities related to the process to formulate and

[5] Available at http://www4.unfccc.int/nap/Pages/national-adaptation-plans.aspx.

[6] This section covers information made available to the LEG by the time of its 34th meeting by the respective bodies and organizations.

[7] See https://unfccc.int/node/28634.

[8] See http://napexpo.org/2018.

[9] The four additional LDCs are Djibouti, Gambia, Guinea and Senegal. Already supported are Bangladesh, Benin, Bhutan, Burundi, Chad, Democratic Republic of the Congo, Guinea-Bissau, Haiti, Liberia, Madagascar, Mozambique, Myanmar, Nepal, Niger, Somalia, United Republic of Tanzania and Vanuatu.

implement NAPs. Furthermore, through the joint FAO–UNDP Integrating Agriculture in National Adaptation Plans programme,[10] 11 countries,[11] of which 4 are LDCs, have continued to receive support for integrating agriculture-related climate change risks and opportunities into their NAPs.

15. Between March and August 2018, the NAP Global Network supported the following NAP-related activities in the LDCs: gender analysis in Benin, Guinea, Madagascar and Togo; awareness-raising in Kiribati; stocktaking in Nepal; development of a draft NAP framework in Sierra Leone and workshops on and the documenting of implementation strategies in Ethiopia.

16. The table below provides a summary of project proposals on NAPs submitted by developing countries for funding under the GCF support modality for NAPs under its Readiness and Preparatory Support Programme, which provides up to USD 3 million per country,[12] and the Least Developed Countries Fund (LDCF). For the GCF, the figures related to the LDCs are shown in parentheses.

Summary of project proposals for accessing funding from the Green Climate Fund and the Least Developed Countries Fund for the formulation of national adaptation plans

Funding source	*Region*	*Number of submitted proposals*	*Approved or endorsed proposals*	*Funds disbursed*
Green Climate Fund	Africa	-	11 (6)	8 (2)
	Asia and the Pacific	-	5 (3)	4 (2)
	Eastern Europe	-	2	1
	Latin America and the Caribbean	-	8	6
	Total (GCF)	**60**	**26 (9)[a]**	**20 (4)**
Least Developed Countries Fund	Africa	7	7	0
	Asia and the Pacific	2	2	0
	Latin America and the Caribbean	0	0	0
	Total (LDCF)	**9[b]**	**9[b]**	**0**

Note: Based on figures supplied by the secretariats of the Green Climate Fund and the Global Environment Facility as at 28 September 2018. For the Green Climate Fund, the figures in parentheses indicate the number of the least developed countries.

[a] Antigua and Barbuda, Argentina, Armenia, Bangladesh, Benin, Bhutan, Bosnia and Herzegovina, Colombia, Costa Rica, Côte d'Ivoire, Democratic Republic of the Congo, Dominica, Dominican Republic, Ecuador, Eswatini, Gabon, Kenya, Liberia, Madagascar, Mauritania, Mongolia, Nepal, Niger, Pakistan, Uruguay and Zimbabwe.

[b] Bangladesh, Chad, Democratic Republic of the Congo, Lao People's Democratic Republic, Niger, Rwanda, Sao Tome and Principe, Senegal and South Sudan.

[10] See http://www.fao.org/in-action/naps/en.

[11] Colombia, Gambia, Guatemala, Kenya, Nepal, Philippines, Thailand, Uganda, Uruguay, Viet Nam and Zambia.

[12] See GCF Board decision B.13/09, paragraph (e).

C. Status of implementation of national adaptation programmes of action

17. The LEG took note of the information supplied by the GEF secretariat on support provided to the LDCs for the preparation and implementation of national adaptation programmes of action (NAPAs),[13] as summarized in paragraphs 18–20 below.

18. As at 24 August 2018, 263 projects from the LDCs for the preparation and implementation of NAPAs had been approved by the GEF Council for funding from the LDCF since its establishment in 2001. The demand for LDCF resources continues to exceed the funds available for new approvals; additional contributions are urgently needed to enable the LDCF to address the priority adaptation needs of the LDCs.

19. As at 30 April 2018, 18 NAPA implementation project proposals submitted by the LDCs, accounting for a total of USD 157 million, had been technically cleared by the GEF secretariat and were awaiting the availability of resources from the LDCF. An additional 11 project proposals, accounting for a total of USD 92 million, had been endorsed by countries' operational focal points and formally submitted for technical review by the GEF secretariat.

20. As at 30 June 2018, the total cumulative donor pledges to the LDCF amounted to USD 1.33 billion and the total paid contributions to USD 1.27 billion.[14] The funding ceiling for each LDC is currently USD 50 million, with a cap of USD 10 million per country for the period 2018–2022.

21. The LEG also noted that the LDCs continue to rely on technical guidance and advice for revising and updating their NAPAs and that it stands ready to provide support upon request.

D. Implementation of the other elements of the least developed countries work programme

22. The LEG took note of the information supplied by UNDP and UNEP indicating that 144 LDC negotiators have been trained under the LDC negotiators capacity-building programme since 2013. The programme is funded with USD 4.5 million from the LDCF.

III. Progress in the implementation of the rolling work programme for 2018–2019

A. Technical guidance and support for the process to formulate and implement national adaptation plans and the work of the national adaptation plan technical working group

1. Open NAPs

23. The LEG took note of the following positive results from the application of the Open NAPs:[15]

(a) The Open NAPs helped to provide a quick practical overview of how the process to formulate and implement NAPs can be rolled out at the national level;

(b) They contributed to the bottom-up evolution and development of the integrative framework for NAPs and the Sustainable Development Goals (NAP-SDG iFrame);

(c) They also helped to identify important results in the application of the NAP-SDG iFrame, such as with regard to the definition of systems, knowledge and methodologies

[13] As per GEF document GEF/LDCF.SCCF.24/04 and updates provided to the LEG.

[14] As footnote 13 above.

[15] Open NAPs cases for Bhutan, Haiti, Madagascar, Malawi and Tuvalu have successfully been advanced and were applied in designing the regional training workshops on NAPs conducted in 2017.

to associate with specific systems and the role of different actors and stakeholders (see chapter III.A.2 below for more details).

24. The LEG also took note of the growing demand from countries to participate in the Open NAPs and of the interest of many organizations to contribute to the Open NAPs.

25. The LEG agreed to continue expanding the Open NAP case studies to more countries, as well as to groups of countries in the same region, so they can consider regional approaches to adaptation planning and implementation. It also agreed to explore ways to further actively engage partners on areas of expertise required in the Open NAPs.

26. The LEG noted the preparation of a concept paper by the NAP technical working group on the following, among other topics:

(a) A description of the Open NAP concept;

(b) A methodology for conducting Open NAP case studies;

(c) Indicative questions that could be addressed through Open NAPs;

(d) A strategy for mobilizing partners.

2. Integrative framework for national adaptation plans and the Sustainable Development Goals

27. The LEG considered the draft publication describing the NAP-SDG iFrame. The NAP-SDG iFrame aims to help to integrate various assessment approaches into NAPs and enable the consideration of ways to contribute to addressing relevant SDGs in conjunction with NAPs. The LEG noted that it will be important to include examples from the LDCs on the different aspects of the NAP-SDG iFrame, including on the possible end-to-end application of the framework. It agreed to develop a policy brief version of the publication for easier communication, in addition to a detailed technical version.

28. The LEG also took note of the following results and takeaways from the application of the NAP-SDG iFrame both in guiding the regional training workshops conducted under the LEG work programme for 2017–2018 and in the Open NAPs:

(a) The NAP-SDG iFrame helped demonstrate how a systems approach helps to focus stocktaking, making assessments, identifying and monitoring actions and facilitating the achievement of coherence and the synergy of adaptation across scales (over time and in different places), levels (e.g. sectoral, subnational and national) and frameworks;

(b) A potential exists for consistency in the definition of systems for a given country, especially for areas that are well studied. In some cases, a finite number of systems would cover most of the effort required to address adaptation sufficiently in a country;

(c) Stakeholders and actors (agencies and organizations) can be clearly identified and major gaps or areas of overlap easily determined;

(d) Knowledge and methodologies, including metrics of success and adequacy, are easier to associate with specific systems;

(e) Further elaboration and harmonization of the taxonomy and nomenclature used in adaptation would help to facilitate collaboration between sectors and work areas, including the tracking and monitoring of activities.

29. The LEG further took note of the ongoing work under the NAP technical working group on preparing supplements to the guidelines for the formulation and implementation of NAPs, which are to describe the NAP-SDG iFrame and supporting tools, and it agreed to compile a list of systems and relevant tools to enrich the supplements.

3. Supplements to the guidelines for the formulation and implementation of national adaptation plans

30. The LEG took note of the following supplements[16] to the technical guidelines for the formulation and implementation of NAPs:

(a) *Addressing Fisheries and Aquaculture in National Adaptation Plans – Supplementary Guidelines* and the *Supplementary Material for Addressing Forests in National Adaptation Plans* by FAO;

(b) *Supplementary NAP Guidelines for Systemic Subnational Adaptation: Experiences from the Local Climate Adaptive Living Facility (LoCAL)* by the United Nations Capital Development Fund;

(c) *Integrating Disaster Risk Reduction in National Adaptation Plans: A Supplement to NAP Technical Guidelines* by the United Nations International Strategy for Disaster Reduction;

(d) *Integrating Human Settlements in the National Adaptation Plans* by the United Nations Human Settlements Programme.

31. The LEG agreed that the supplements play an important role in providing detailed information on specific issues, but noted the continued need for stronger alignment of the supplements to the guidelines to strengthen integrative approaches and avoid silo approaches. It also agreed to continue to work with organizations that are developing supplements to explore how best to align them with the guidelines.

32. The LEG further agreed to update the guidance on the development of the supplements to include information on how to best link them with the NAP-SDG iFrame. In addition, the LEG considered developing navigation guides for the application of supplements in the formulation and implementation of NAPs.

4. Monitoring and assessing progress made on national adaptation plans

33. The LEG took note of the following elements from the presentation of an expert invited to contribute to the discussion on monitoring and assessing progress made on NAPs:

(a) Effective assessment of progress on adaptation involves both descriptive and evaluative assessments;

(b) Descriptive assessments can be based on country level data from various sources, and evaluative assessments on country profiles, national participatory processes, and expert and progress assessments;

(c) There are methodologies for aggregating source data for use in a national level assessments of progress (e.g. through a national audit and systematic synthesis, participatory assessment of alignment, and expert assessment of progress) and data from a national level assessment for use in a global level assessment (e.g. through meta-synthesis of country profiles, progress narratives, gaps, adequacy and effectiveness);

(d) Factors in an effective assessment include: embracing and allowing assessment across a diversity of national contexts; ensuring that data and relevant methodologies allow for aggregation and comparison; minimizing the aggregation of subnational diversity and narratives; conceptual scalability across levels, sectors and institutions; focusing on concepts rather than indicators; allowing for longitudinal assessment and consideration of mitigation progress; reflecting diverse values and principles; and transparent, systematic and rigorous approaches.

34. The LEG noted that in addition to serving as a national reporting tool, the NAPs will play an important role in facilitating reporting under the Paris Agreement. It agreed to consider how NAPs can comprehensively capture information on adaptation at the national level to underpin assessments, with a view to including such consideration in further technical guidance on NAPs.

[16] In development or being finalized.

5. Learning from climate shocks

35. Based on presentations from the NAP Expos and other recent events, the LEG noted that the experience from climate shocks (such as storms, floods, droughts and heatwaves) offers valuable lessons on how governments and communities are reacting and responding before, during and after the shocks.

36. The LEG noted that the evolution of these events also offers new insights on how the impacts evolve and propagate between systems. For example, impacts of droughts propagate from immediate water shortages within the affected region to longer-term impacts on commodity production and prices, conflicts, migration and other stresses that can reach a global scale. In some cases, major shocks can result in impacts that cascade through regional supply chains.

37. The LEG further noted that the experience helps to highlight vulnerabilities in ways that traditional vulnerability assessments cannot. The experience helps to identify the shortcomings in or failures of measures that were supposed to protect systems from the expected impacts of climate change. It also contributes to exploring the synergy between climate change adaptation and disaster risk reduction and to informing regional approaches to adaptation planning and implementation.

38. The LEG agreed to continue to provide opportunities for countries to share their experience related to climate shocks at the NAP Expos, side events, workshops and other events, with a view to exploring at its subsequent meetings how such experiences can best inform adaptation planning and implementation.

6. Training on national adaptation plans

39. The LEG discussed the strategy for the training on NAPs to be conducted in 2019 as part of the LEG work programme for 2018–2019. The LEG will engage the NAP technical working group to support the design of the training, including exploring possible groupings, identifying training topics, developing training modules and proposing participants, and to deliver the training.

40. The LEG noted that initial considerations for the grouping of countries may include a country's stage in the process to formulate and implement NAPs, geographic location, language, potential for mutual learning and exchanges, and other factors.

41. The LEG agreed that the workshops would focus on topics that will best benefit the respective countries. Special attention could thus be given to countries that are still far behind in the process to formulate and implement NAPs while also allowing for a focus on the implementation of NAPs through policies, projects and programmes. The topics for each group of countries will be determined in consultation with the countries involved.

7. Supporting the process to formulate and implement national adaptation plans through NAP Central

42. The LEG took note of the ongoing enhancements to NAP Central, including the implementation of the country profiles and the NAP tracking tool.

43. The LEG noted that there are currently NAPs from 11 developing countries on NAP Central[17] and encouraged all developing countries to continue to share their NAPs and related outputs through NAP Central.

8. Workplan of the national adaptation plan technical working group

44. The LEG took note of the progress made by the NAP technical working group in continuing to support the work of the LEG relating to technical guidance and support for NAPs. It recalled the meeting of the group held at the forty-eighth sessions of the subsidiary bodies in April 2018 to discuss progress on enhancements to NAP Central, Open NAPs, training activities on NAPs for 2018–2019, developing country gaps and needs in relation to

[17] Available at http://www4.unfccc.int/nap/Pages/national-adaptation-plans.aspx.

the process to formulate and implement NAPs, supplements to the guidelines for the formulation and implementation of NAPs, and integrative approaches. Representatives from 15 organizations[18] took part in the meeting.

45. The LEG agreed to continue to strengthen the work of the NAP technical working group through continued engagement in the development of technical methodologies for NAPs and strategic collaboration with relevant organizations and with regional centres and networks.

46. The LEG also agreed to continue to exploit opportunities to continue to advance its work at its meetings, held including in conjunction with the NAP Expos and sessions of the COP and the subsidiary bodies.

B. Matters relating to access to the Green Climate Fund

47. The LEG considered the draft frequently asked questions addressing the emerging needs and challenges faced by countries with regard to accessing funding from the GCF for the process to formulate and implement NAPs. The LEG agreed to finalize and implement online the questions by the end of November 2018.

48. The LEG took note of the active engagement of the GCF secretariat at the NAP Expo 2018 and conducted sessions targeting country experts (NAP teams and GCF focal points) on accessing funding from the GCF for the process to formulate and implement NAPs.[19] The LEG also took note of the interest from the GCF secretariat to engage in the organization of the 2019 NAP Expo, referred to in chapter III.C below.

C. NAP Expos

49. The LEG discussed the following issues in relation to the NAP Expos: a publication on highlights from the NAP Expos, arrangements for the NAP Expo 2019 and the strategy for regional and national NAP Expos.

50. The LEG identified a set of key messages and topics that would help to capture the technical advances in the process to formulate and implement NAPs and thus serve as the main components of that publication. These will be accompanied by a collection of examples of data, tools, assessment approaches, adaptation solutions, technological innovations and other specific country experiences such as on learning from climate shocks. The publication will be based on the content from all the NAP Expos conducted thus far and will document the rich interactions and outcomes from the events. The publication is planned to be completed by November 2018.

51. The LEG considered initial elements of a concept note to guide the organization of the NAP Expo in 2019, planned to take place in April 2019 in the Republic of Korea. Exact dates and venue will be publicized in due course. The event will be organized under the overriding theme of the NAP Expos of "advancing NAPs". Building on the previous events, the NAP Expo in 2019 will facilitate outreach on technical guidance on NAPs, discuss access to funding for NAPs, provide a platform for sharing innovative approaches on implementing adaptation and a platform for fostering partnerships between countries and all actors and stakeholders in NAPs.

52. The LEG will launch an advisory group for the NAP Expo in 2019 in October 2018 composed of representatives of Parties, UNFCCC bodies and relevant organizations, and regional centres and networks. Together with the NAP technical working group, the advisory group will assist the LEG with identifying topics for the NAP Expo, identifying keynote

[18] CCAFS, Climate Service Center Germany, Conservation International, Deutsche Gesellschaft für Internationale Zusammenarbeit, FAO, Global Water Partnership, NAP Global Network, Stockholm International Water Institute, Sri Lankan Youth Climate Action Network, UNDP, UNEP, United Nations Educational, Scientific and Cultural Organization, United Nations International Strategy for Disaster Reduction, United Nations Institute for Training and Research, and WMO.

[19] See http://napexpo.org/2018/schedule.

speakers, developing and refining the programme for the event and mobilizing and funding participants.

53. The LEG noted that regional NAP Expos help to deepen the engagement of the actors and stakeholders at the regional and national level and their understanding of the process to formulate and implement NAPs. The LEG agreed to expand the interactive nature of the events to maximize learning. Two more regional NAP Expos are scheduled to take place in 2018: one during the Third Inter-Ministerial Conference on Health and Environment in Libreville, Gabon, from 9 to 12 October 2018, and one during the NAP-GSP workshop for Latin American countries from 22 to 24 October 2018. The regional NAP Expos will be conducted with the support of the NAP technical working group.

54. On national NAP Expos, the LEG took note of the interest expressed by some countries to conduct national NAP Expos in order to strengthen political buy-in and awareness and mobilize and facilitate the engagement of all national actors and stakeholders. The LEG also took note of the request by some of the countries for support in conducting their national NAP Expos. The LEG agreed to provide technical materials for such events upon request and to the extent possible, but made it clear that it would not be in a position to take an active role in the conduct of such events.

D. Technical guidance and advice on vulnerable communities, groups and ecosystems in adaptation planning and implementation

55. The LEG continued its consideration of the draft paper on considerations regarding vulnerable communities, groups and ecosystems in adaptation planning and implementation.

56. The paper will communicate examples of best practices in vulnerable communities, groups and ecosystems adapting to climate change and provide concrete guidance or recommendations. It will also address the linkages between vulnerable communities and groups and the vulnerable ecosystems in which they live.

57. The LEG agreed to finalize the paper in December 2018. The paper will be used as part of the supplements to the guidelines for the formulation and implementation of NAPs.

E. Implementation of national adaptation plans

58. The LEG continued its consideration of the mandate from the SBI for the AC and the LEG, following the 2018 NAP Expo, to consider ways to assist with the implementation of NAPs.[20] Based on observations from the NAP Expo, the LEG noted that initial challenges include those relate to access to funding, strong leadership and coordination, institutional and technical capacity for developing bankable proposals and for their execution, monitoring and evaluation, and effective stakeholder engagement.

59. The LEG agreed to consult with Parties to further identify needs and challenges related to implementing policies, projects and programmes identified in their NAPs. It decided to engage the NAP champions in communicating the importance of strong leadership in facilitating the implementation of adaptation actions. The LEG also agreed to coordinate its actions with those of the AC to ensure complementarity in addressing the mandate.

60. The LEG noted that in addition to the implementation of policies, projects and programmes identified in the NAPs, countries will need to continue to undertake activities aimed at supporting the process to formulate and implement NAPs, such as the following: maintaining effective coordination and leadership arrangements; collection, compilation, processing and dissemination of data, information and knowledge; identifying and addressing capacity gaps and needs; risk assessments; monitoring, review and updating, and reporting and outreach.

[20] FCCC/SBI/2017/19, paragraph 73.

F. Country profiling of the least developed countries

61. The LEG discussed its strategy for tracking progress on NAPs and related challenges that the LDCs continue to face. It tasked each of its members with following the status of specific LDCs in that regard and identifying priority gaps and needs for consideration by the LEG at each of its meetings. The members will work with the support of the secretariat and liaise with the national focal points and other relevant partners working actively with the countries. The information will be shared online through the NAP tracking tool and will inform future technical support and advice from the LEG.

G. Collaboration with other bodies and programmes under the Convention

62. The LEG took note of the following collaborative activities with relevant bodies and programmes under the Convention that have taken place since its 33rd meeting:

(a) Engagement in the work of the AC task force on NAPs and the work of the AC on the technical examination process on adaptation. The LEG presented its work on vulnerable communities, groups and ecosystems [21] at the technical expert meeting on adaptation at the forty-eighth sessions of the subsidiary bodies;

(b) Engagement in the task force on displacement[22] of the Executive Committee of the Warsaw International Mechanism;

(c) Ongoing engagement with the Technology Executive Committee on developing a paper on aligning technology needs assessments and NAPs;

(d) Engagement with the Standing Committee on Finance on climate-finance related matters;

(e) Exchange of information with the Paris Committee on Capacity-building on capacity-building support provided to the LDCs and potential areas of collaboration;[23]

(f) Engagement with NWP partner organizations in the organization of the 2018 NAP Expo and the work of the NAP technical working group, including participation at the NWP side event at the forty-eighth sessions of the subsidiary bodies. The LEG consequently took note of the request by the Subsidiary Body for Technological and Scientific Advice (SBSTA) to encourage NWP partner organizations to produce usable knowledge products and catalyse action, including in relation to NAPs in cooperation with the LEG;

(g) Participation in the gender dialogue to provide details on the work of the LEG on technical guidance and advice on strengthening gender considerations in the process to formulate and implement NAPs;[24]

(h) Participation in the SBSTA research dialogue to discuss the needs of the LDCs on climate change research and research-related capacity-building.[25]

H. Discussion with the Government of Sierra Leone

63. The LEG held discussions with the adaptation team of the Government of Sierra Leone on the country's progress, challenges, gaps and needs in the process to formulate and implement NAPs. The team was led by the Permanent Secretary of the Ministry of Transport and Aviation, Mr. Brima S. T. Kebbie, and included experts from the Environmental Protection Agency, Ministry of Fisheries and Marine Resources, Ministry of Lands, Housing and the Environment, Ministry of Planning and Economic Development, Ministry of Social Welfare, Ministry of Tourism and Cultural Activities, Ministry of Transport and Aviation,

[21] Available at http://tep-a.org/sessions/technical-expert-meeting-2018.
[22] See https://unfccc.int/wim-excom/sub-groups/TFD.
[23] See https://unfccc.int/sites/default/files/resource/LEG%20Intervention_PCCB.pdf.
[24] See https://unfccc.int/sites/default/files/resource/LEG%20Gender%20and%20NAPs.pdf.
[25] See https://unfccc.int/node/61001.

Ministry of Water Resources, National Tourist Board, Office of National Security, Sierra Leone Meteorological Agency and a NAPA project implemented with the support of the International Fund for Agricultural Development.

64. The team indicated that concrete implementation of adaptation actions has only been initiated through the NAPA, and that major successes and lessons are yet to be realized. They presented details on the implementation of a NAPA project on integrating adaptation into agricultural production and food security in Sierra Leone,[26] and on how that has created awareness, built capacity and generated preliminary lessons and best practices to inform the formulation and implementation of Sierra Leone's NAP.

65. The team provided the following details regarding the progress made on the country's NAP:

(a) The process was effectively launched in March 2018;

(b) It is led by the Environmental Protection Agency and guided by the National Environmental Policy (1997) and the Environmental Protection Act (2004);

(c) A road map has been developed containing, among other activities, the establishment of a NAP team; stakeholder consultations; assessments at national, subnational and sectoral levels; compilation of a NAP document and communication of progress;

(d) A framework is currently being developed to set the approach for the formulation and implementation of Sierra Leone's NAP with the assistance of the NAP Global Network;

(e) The process will draw on lessons from previous and ongoing adaptation activities, particularly the NAPA, and will also incorporate lessons from recent disasters that include the catastrophic mudslides that occurred in Freetown in August 2017 and the Ebola epidemic;

(f) The University of Sierra Leone undertakes relevant research, such as an ongoing study on gender and climate change adaptation in Sierra Leone;

(g) Learning from neighbouring countries such as Liberia will be pursued.

66. The team expressed the country's need for more funding to expand the NAPA project referred to in paragraph 64 above by covering more of the priority regions identified in the country's NAPA. The team also expressed the need for technical support to advance the formulation of the NAP, including compiling good practices for the formulation of the NAP and the implementation of adaptation actions as a knowledge resource.

67. The Government officially requested the LEG to extend support to Sierra Leone under the Open NAPs. A strategy will be put in place for the support that will also include the engagement of other partners that are or will be supporting the country in formulating and implementing its NAP.

68. The Government took the meeting participants on a study tour of climate-related disasters and community responses. The following communities were visited: a coastal community along river Number 2 in Freetown to see how the community is generating income and building livelihood resilience by protecting the coastal ecosystem from the impacts of climate change; and the Mortomeh community, where a mudslide that led to a massive loss of lives occurred in 2017, to hear from Government officials and local communities about the experience before, during and after the disaster and related responses by the Government.

I. Discussions with relevant organizations

69. The LEG held discussions with the representatives of the GEF secretariat, UNDP, UNEP, WMO and CCAFS on progress and latest developments with regard to support to the LDCs on adaptation and further collaboration in supporting the LDCs in specific areas

[26] Available at https://www.thegef.org/project/integrating-adaptation-climate-change-agricultural-production-and-food-security-sierra-leone.

(linkages of NAPs with nationally determined contributions (NDCs), NAP Expos, training on NAPs for 2019, the work of the NAP technical working group and NAP Central). The LEG took note of related inputs from the GCF secretariat and the International Institute for Sustainable Development. The remainder of this subchapter summarizes the discussions on the latest developments and collaboration on support to the LDCs. Information on the support provided is summarized in chapter II.B and C above.

70. Regarding progress made in the process to formulate and implement NAPs, the LEG reminded the organizations of the vision of the LEG for, among other elements, all LDCs to have formulated their first generation of NAPs by 2020. The LEG and the organizations noted that some countries had not made any significant advancements yet, and that it will be important to examine potential causes, including lack of support. They agreed that it will be important to map support provided to the countries with a view to identifying cases where little or no support is being provided. They also agreed to continue to strengthen efforts to coordinate the support provided to the countries for the formulation and implementation of NAPs. They noted that the NAP technical working group, the NAP calendar and regular interactions between the LEG and relevant organizations play an important role in facilitating that coordination.

71. The GEF secretariat provided highlights on the GEF Programming Strategy on Adaptation for the LDCF and the Special Climate Change Fund (SCCF) (2018–2022)[27] and related operational improvements for the LDCF. The key improvements are as follows:

(a) The project selection and approval process will be based on a work programme to be approved by the LDCF/SCCF Council, with projects selected based on prioritization factors (see para. 68(b) below) as opposed to on a first come, first served basis, as previously done;

(b) Funding proposals will be prioritized according to: alignment with national needs and priorities; alignment with the GEF programming strategy; opportunities to leverage or catalyse support; level of LDCF resources accessed; and other factors such as potential for private sector engagement, geographic balance, extenuating circumstances and timing of technical approval;

(c) The total funding ceiling for each LDC has been raised to USD 50 million, with a cap of USD 10 million per country for the period 2018–2022;

(d) Additional capacity-building support will be provided to the LDCs for planning and programming, including by integrating LDCF and SCCF planning into country dialogues; conducting project development workshops for the LDCs; exploring regional and global initiatives for capacity-building, knowledge management and sharing of lessons; and integrating technical assistance in project design;

(e) Reassessing the current relevance of the existing pipeline of NAPA projects that had been technically cleared by the GEF secretariat, and aligning the projects with the vision for the seventh replenishment of the GEF.

72. The LEG and the relevant organizations noted the importance of synergy and coherence of adaptation information in NAPs and NDCs. The organizations recommended that the LEG develop a policy brief on the synergy and coherence of NAPs and NDCs and invite countries to share related experience, best practices and possible challenges at LEG side events at climate change conferences or at NAP Expos.

73. The LEG provided highlights on plans for the 2019 NAP Expo and the regional NAP Expos (as summarized in chapter III.C above), and invited input from the relevant organizations on the topics, design of the events, and mobilization of and support for participants. The organizations provided preliminary input, including on adding topics on linkages between NAPs and NDCs and on measuring progress prior to the 2019 event. They reaffirmed their readiness to actively engage in the organization of NAP Expos.

[27] Available at https://www.thegef.org/events/gef-climate-change-adaptation-strategy-2018-2022-ldcf-and-sccf.

74. The LEG introduced the status of planning for training on NAPs (see chapter III.A.5 above). The organizations emphasized the critical importance of the training by the LEG for helping countries develop NAP road maps and frameworks for the effective engagement of all partners.

75. The LEG reminded the relevant organizations of the recommendation of the NAP technical working group at its meeting held during the forty-eighth sessions of the subsidiary bodies for the organizations to continue to contribute information for inclusion on NAP Central on progress made in supporting countries in the formulation of NAPs and in recording NAP-related events and activities in the NAP calendar. The LEG invited the organizations continue to provide such information as and when it becomes available, and to work with countries to share relevant outputs and outcomes from the formulation and implementation of NAPs. The organizations suggested that it would be useful to help countries to establish knowledge management systems for the audit of their adaptation activities so they can maintain a systematic record of their progress on adaptation and be better prepared to effectively engage in the transparency framework and the global stocktake under the Paris Agreement.

76. The organizations expressed their appreciation for the continued facilitation by the LEG of the coordination of activities and collaboration on supporting the LDCs.

J. Highlights on priority activities for 2018–2019

77. A number of activities under the LEG work programme for 2018–2019 have been successfully delivered, including the following:

(a) Supporting the SBI assessment of progress made on NAPs by developing terms of reference for the assessment, leading data collection and analysis, mobilizing relevant organizations to contribute towards the collection and analysis of data, conducting a meeting of Party experts and reporting to the SBI;[28]

(b) Recommendations to the SBI on updating the LDC work programme;[29]

(c) Compilation of gaps and needs related to adaptation arising from the Paris Agreement and COP 21 decisions;[30]

(d) NAP Expo from 4 to 6 April, in Sharm El Sheikh,[31] and a regional NAP Expo at the 11th International Conference on Community-Based Adaptation.[32]

78. Other priority activities include developing a strategy and outline for the training on implementation of NAPs in 2019, organizing the regional NAP Expos and advancing preparations for the NAP Expo in 2019 referred to in chapter III.C above.

79. The LEG will finalize the following deliverables before COP 24: the NAP-SDG iFrame; a technical report on the consideration of vulnerable communities, groups and ecosystems in NAPs; and highlights from the NAP Expos. It will also continue the online implementation of the frequently asked questions on the GCF and NAPs.

80. Other key activities include addressing the mandate from SBI on advising on the implementation of NAPs, ongoing development of Open NAPs, preparations for LEG events and effective engagement at COP 24.

[28] See document FCCC/SBI/2018/6 and https://unfccc.int/node/28634 for more details.
[29] FCCC/SBI/2018/4, paragraphs 62–66.
[30] FCCC/SBI/2018/4, paragraphs 50–52.
[31] See http://napexpo.org/2018.
[32] See http://napexpo.org/malawi.

Annex

Members of the Least Developed Countries Expert Group as at 21 August 2018

Mr. Erwin Künzi	Austria
Ms. Sonam Khandu	Bhutan
Mr. Idrissa Semde	Burkina Faso
Ms. Beth Lavender	Canada
Mr. Kenel Delusca	Haiti
Ms. Michelle Winthrop	Ireland
Mr. Benon Yassin	Malawi
Mr. Ram Prasad Lamsal	Nepal
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Ms. Hana Hamadalla Mohamed	Sudan
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United Nations

Framework Convention on Climate Change

FCCC/SBI/2018/19

Distr.: General
24 September 2018

Original: English

Subsidiary Body for Implementation
Forty-ninth session
Katowice, 2–8 December 2018

Item X of the provisional agenda

The 6th Dialogue on Action for Climate Empowerment

Summary report by the secretariat

Summary

The 6th Dialogue on Action for Climate Empowerment was held during the forty-eighth session of the Subsidiary Body for Implementation, on 8 and 9 May 2018. Representatives of Parties, intergovernmental and non-governmental organizations, media and other relevant stakeholders shared best practices and lessons learned regarding public awareness, public participation and public access to information in relation to climate change and international cooperation on those matters. Furthermore, the Dialogue included a discussion on gender mainstreaming in the implementation of Action for Climate Empowerment.

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I. Introduction

A. Background and mandate

1. Reaffirming the importance of education, training, public awareness, public participation and public access to information in relation to climate change and international cooperation on those matters for achieving the ultimate objective of the Convention and effectively implementing adaptation and mitigation actions, the Conference of the Parties (COP), at its eighteenth session, adopted the Doha work programme on Article 6 of the Convention.[1]

2. In addition, the COP requested the Subsidiary Body for Implementation (SBI) to enhance the work on Article 6 of the Convention by organizing an annual in-session dialogue with the participation of Parties, representatives of relevant bodies established under the Convention and relevant experts, practitioners and stakeholders to share their experience and exchange ideas, best practices and lessons learned regarding the implementation of the Doha work programme.[2]

3. The COP decided that, for the purpose of organizing the Dialogue on Action for Climate Empowerment,[3] the six elements of Article 6 of the Convention would be clustered into two focal areas, with the consideration of the two areas alternating on an annual basis. The first focal area comprises education and training and the second comprises public awareness, public participation and public access to information. International cooperation is considered a cross-cutting theme of both focal areas.[4]

4. Moreover, COP 23 adopted a gender action plan,[5] which invites Parties to hold a dialogue under Action for Climate Empowerment (ACE) on how Parties and observer organizations have promoted the systematic integration of gender-sensitive and participatory education, training, public awareness, public participation and public access to information from the national to the local level into all climate change mitigation and adaptation activities implemented under the Convention and the Paris Agreement, including into the implementation of nationally determined contributions (NDCs) and the formulation of long-term, low greenhouse gas emission development strategies.[6] The 6th Dialogue on Action for Climate Empowerment (hereinafter referred to as the Dialogue) included a focus on gender in response to this request to Parties.

5. The COP requested the secretariat to prepare a summary report on every meeting of the dialogue referred to in paragraph 2 above.[7]

B. Possible action by the Subsidiary Body for Implementation

6. The SBI may wish to consider the information contained in this report with a view to determining appropriate action.

II. Proceedings

7. The Dialogue took place on 8 and 9 May 2018, during SBI 48. The focus was on the second focal area referred to in paragraph 3 above: public awareness, public participation,

[1] Decision 15/CP.18, preamble and paragraph 1.
[2] Decision 15/CP.18, paragraph 9.
[3] As part of the intermediate review of the Doha work programme, on a recommendation of SBI 44, COP 22 decided that efforts related to the implementation of Article 6 of the Convention shall be referred to as Action for Climate Empowerment (decision 17/CP.22, para. 14).
[4] Decision 15/CP.18, paragraph 10.
[5] Decision 3/CP.23.
[6] Decision 3/CP.23, table 1, activity A.2.
[7] Decision 15/CP.18, paragraph 12.

public access to information and international cooperation on those matters, as well as the systematic integration of gender considerations into ACE.

8. More than 100 representatives of Parties, intergovernmental organizations, non-governmental organizations (NGOs), media and other relevant stakeholders attended the Dialogue and shared best practices and lessons learned regarding public awareness, public participation, public access to information and international cooperation on these matters, as well as gender mainstreaming in ACE implementation.

9. The Chair of the SBI, Mr. Emmanuel Dlamini, presided over the meeting. He was supported by the co-facilitators of the Dialogue, Mr. Paulo Jose Chiarelli, UNFCCC national focal point for Brazil, and Ms. Emma Letellier, UNFCCC national gender and climate change focal point for France.

10. The meeting was divided into two three-hour working sessions, focusing on the two focus areas:

(a) Public awareness and international cooperation thereon;

(b) Public participation, public access to information and international cooperation thereon.

11. Each working session started with a series of presentations, followed by working group discussions on key topics related to the two focus areas. The working groups were moderated by climate change and gender experts from various organizations.

12. The agenda for the meeting is contained in the annex. All presentations[8] and the on-demand webcast for 8 May[9] and 9 May[10] are available on the UNFCCC website. An article about the Dialogue is also available in the UNFCCC newsroom.[11]

III. Summary of presentations and discussions

A. Opening of the 6th Dialogue on Action for Climate Empowerment

13. The meeting was opened by the co-facilitators of the Dialogue, who welcomed participants.

14. Welcoming remarks were made by Ms. Patricia Espinosa, Executive Secretary of the UNFCCC, who stressed that climate change is a critical issue for present and future generations. She highlighted that although the negotiations are country-driven, national governments alone cannot solve this issue, and therefore the participation of non-Party stakeholders is indispensable. She stressed that including different voices, perspectives and areas of interest from multiple stakeholders, such as young people, indigenous communities, the private sector and researchers, can accelerate climate action. She encouraged participants to work together to make the world greener and to spread the message of urgency to address climate change.

15. The COP 23 President and Prime Minister of Fiji, Mr. Frank Bainimarama, also delivered welcoming remarks. He stressed that dialoguing in the Talanoa spirit is an important step on the journey towards decisive action, and noted that telling and listening to stories can show how to facilitate action to meet the climate challenge more effectively. He explained that countries, subnational governments, regions, civil society, the private sector and ordinary men and women have the power to inspire and mobilize meaningful, decisive and sustainable action. He pointed out that Fiji has experienced back-to-back cyclones that

[8] Available at https://unfccc.int/event/6th-dialogue-on-action-for-climate-empowerment.

[9] Available at https://unfccc-sb48.cloud.streamworld.de/webcast/6th-dialogue-on-action-for-climate-empowerment-p-2.

[10] Available at https://unfccc-sb48.cloud.streamworld.de/webcast/6th-dialogue-on-action-for-climate-empowerment-p-3.

[11] See https://unfccc.int/news/public-information-engagement-welcome-point-of-agreement-at-climate-negotiations.

have claimed lives, left people homeless and destroyed infrastructure. He stated that those who have witnessed the effects of climate change need no convincing, while people who are somewhat removed from the issue still do, and he expressed pride in his country's efforts to organize the first ACE Youth Forum,[12] held in April of this year in Bonn, Germany, so as to engage the youth constituency and mobilize gender issues in the international climate process.

16. Mr. Dlamini stressed in his opening remarks that Article 6 of the Convention and Article 12 of the Paris Agreement are fundamental to enabling low-emission development and achieving climate resilience. ACE is about transforming values and behaviours and enhancing public participation in decision-making. He pointed out that the ACE dialogue provides a platform for exchanging experiences, good practices and problem-solving approaches. He also pointed out that the outputs of the Dialogue will contribute to the final review of the Doha work programme in 2020 and enhance the implementation of the gender action plan. He concluded by announcing that the SBI has recommended the first decision in the Paris Agreement work programme, on "ways of enhancing the implementation of education, training, public awareness, public participation and public access to information".[13]

B. Session I: public awareness and international cooperation thereon

1. Presentations

17. Presentations were made on good practices and lessons learned in public awareness and gender mainstreaming on ACE and international cooperation thereon. A representative of Climate Outreach,[14] a climate communication organization that connects social research with practice, presented lessons learned on raising awareness and communicating climate change. He said effective communication is critical for public engagement in climate action but noted communicating about climate change is a challenge because it is seen as a distant, complex scientific problem. He presented principles from the handbook on science communication[15] produced for the Intergovernmental Panel on Climate Change, which include talking about the real world, not abstract ideas; connecting with what matters to the audience; telling a human story and using appropriate visual communication. In addition, he explained that messages should respond to the specific needs, values and contexts of each audience. The presenter outlined that social research shows that women who are highly affected by climate change feel less empowered than men to address it. Therefore, communication tailored to women, faith groups, young people and marginalized communities is a fundamental part of the solution. The presenter suggested monitoring and evaluating the impact of climate communication.

18. A representative of Diverse Voices and Action for Equality[16] (DIVA for Equality), a grass-roots, women-led organization, delivered a presentation on women-led approaches to social, economic, ecological and climate justice. DIVA for Equality uses intersectoral and interlinking approaches connecting climate change with other issues, such as food security, violence, disaster risk reduction and human rights, to engage marginalized women in climate action. She identified the following challenges faced by local communities in addressing climate change: lack of information, lack of participatory consultations when development projects are implemented, insufficient funding and lack of involvement of women in decision-making. She recommended investing in social movements, democratizing diverse knowledge and integrating gender perspective into climate action and processes. She stressed the importance of engaging marginalized and rural communities as part of climate solutions. She also highlighted the experience of hosting in 2018 a women-led Talanoa session in a remote community in Fiji, which included participation by people who may not otherwise have had an opportunity to share their stories and identify collective solutions.

[12] See https://unfccc.int/topics/education-youth/youth-engagement/ace-youth-forum.
[13] FCCC/SBI/2018/9/Add.1, pp.5–6.
[14] See https://climateoutreach.org/.
[15] Available at https://climateoutreach.org/resources/ipcc-communications-handbook.
[16] See http://www.divafiji.com/.

19. Representatives of youth non-governmental organizations (YOUNGOs), a constituency comprising more than 200 youth-led NGOs and over 3,000 individuals, presented on efforts led by young people in raising awareness and mobilizing climate action. Efforts led by YOUNGOs included co-organizing the first ACE Youth Forum. The event was an initiative of the COP 23 Presidency, and was funded by the Government of Canada with support from the United Nations Development Programme and the UNFCCC secretariat. The event brought together participants from more than 70 countries and resulted in youth recommendations for the ACE negotiations. The representatives drew attention to the importance of including ACE elements in the NDCs and the national adaptation plans, as well as engaging youth and other non-Party stakeholders in the implementation of the Paris Agreement.

2. Working group discussions and conclusions

20. The participants were divided into four working groups:

(a) Working group one discussed reaching remote or marginalized people and communities when raising awareness on climate change;

(b) Working group two discussed raising awareness of the links between gender and climate change in local communities;

(c) Working group three discussed using technology (e.g. social media, Internet, radio) to expand the reach of information on climate change and its impacts and solutions, taking into account differences in access and use by men, women, boys and girls;

(d) Working group four discussed using international cooperation to raise public awareness and mobilize climate action.

21. Working group one pointed out the importance of using multiple approaches and methodologies that foster a bottom-up approach, dialogue, and two-way communication to facilitate reaching marginalized communities and to allow the communities to be heard by decision makers. The group stressed that public access to information is a human right. It recommended packaging information in accordance with local needs and circumstances and using existing communication media and forms, such as television novellas, comic books and shows, and engaging well-known ambassadors who can help spread the message through their fan bases. The group recommended empowering and supporting existing community groups and leaders to scale up their work and suggested this might be done by registering organizations, raising awareness with donors to help make funding available, fostering community participation in decision-making and creating spaces such as the Talanoa Dialogue where governments and non-Party stakeholders can engage in fruitful conversations and find climate solutions. It also shared the experience of obtaining input from local communities on the gender action plan.

22. Working group two stressed that men and women are affected differently by climate change because their roles in their communities are different, as are the channels through which they receive information. For example, in some rural communities, women do not listen to the radio, use text messages or read newspapers. Therefore, the group recommended developing gender-sensitive communication strategies with tailored messages, using local languages and disseminating information through context-appropriate channels and with correct timing to reach women. Peer-to-peer communication, women gatherings, local mediators and mentorship programmes were highlighted as effective means of engaging women in leading climate action. Energy, food security and water were cited as topics that could be covered in climate change messages to women.

23. The group pointed out that gender equality requires the active participation of men and women, and therefore individuals should be empowered to become gender champions in their communities. It stressed the importance of mainstreaming gender into climate action at all levels, including by raising the awareness of policymakers, ensuring respect for gender equality in climate policies and projects, organizing community training on gender and building the capacity of women and girls to implement climate action. Moreover, universities and other educational institutions were suggested as good partners for reaching communities and for mainstreaming gender issues by including gender in academic curricula.

24. Working group three identified challenges such as poor or no Internet access, the use of Internet and social media varying by age and region, and the 'filter bubble' effect of social media whereby people receive a narrow stream of information based on their previous searches and content preferences. It was stressed that to disseminate climate change information, each community should make the best use of the technology available, including local channels of communication, radio, phones and local meetings. The group suggested using inclusive language to engage women in climate action; tailored messages for men and women; climate information transmitted in an understandable way and in local languages; and climate messages focused on solutions that align with local circumstances, needs and culture. The group noted that online forums, podcasts, innovative software applications, YouTube videos and interactive games can also be used. The group suggested establishing partnerships with local media, schools, bloggers, influencers, companies and weather forecasters to provide information on climate change to more people.

25. Working group four highlighted that international cooperation can foster exchanges of good practices and lessons learned among governments, organizations and communities. International cooperation can also enhance multi-stakeholder dialogues and bilateral collaboration among countries and can empower women, indigenous peoples and others by allowing them to share their experiences. In addition, international cooperation can strengthen existing groups working on climate change, such as networks of universities, schools and NGOs. The group suggested connecting ACE focal points with local youth and NGOs to reach sectors of the public that are still not engaged in climate action. Additionally, the group acknowledged the challenge of creating ownership of the issue, sustainability of action and capacity for international cooperation, which could be addressed through an appropriate alignment of national policies. Such alignment would also help to ensure continuity. The group suggested implementing a combination of virtual and physical meetings to engage youth in climate action, as well as making funding available to support youth participation in climate meetings.

C. Session II: public participation, public access to information and international cooperation thereon

1. Outline and objectives of session II

26. The meeting was opened by the co-facilitators of the Dialogue, who outlined the objectives of the session: the sharing and exchange of experiences, ideas, best practices and lessons learned regarding public participation, public access to information, international cooperation, and gender mainstreaming in the implementation of ACE.

2. Keynote speaker

27. The session started with a keynote speech by Ms. Mary Robinson, former President of the Republic of Ireland and Chair of the Mary Robinson Foundation – Climate Justice. She stressed the importance of fostering gender equality and public participation in the decision-making process and climate action. She emphasized that climate policy needs more input from the people experiencing climate change first-hand, including local communities, indigenous people and women. She said ensuring gender balance and ensuring that women are represented in decision-making can lead to more robust and impactful decisions. She explained that the participation of women and the integration of their knowledge and expertise in the implementation of NDCs should be a priority in all countries.

28. She recalled the preamble of the Paris Agreement which states that "Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights". She highlighted the importance of adopting a human rights-based approach to national-level activities, which can strengthen procedural rights and increase the effectiveness of climate decision-making. For that she suggested appointing a human rights focal point at the UNFCCC secretariat, developing guidelines on integrating human rights into climate action, urging Parties and NGOs and other observers to include representatives of local communities in their delegations to climate conferences and fostering their participation in dialogues and workshops.

3. Presentations

29. A series of presentations was made on good practices and lessons learned in fostering public participation and access to information. A representative of the United Nations Human Rights Council presented on the interlinkages between human rights and climate change. He recalled Article 12 of the Paris Agreement, which states that "Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information". He stressed that public participation and access to information are human rights recognized in multiple international instruments, including the International Covenant on Civil and Political Rights. In the context of environmental issues, the right to participate and access information is reinforced by Principle 10 of the Rio Declaration on Environmem and Development,[17] the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention)[18] and the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazu Agreement).[19] He stressed that education is a human right, and highlighted that the local communities and indigenous peoples platform, the gender action plan and ACE are entry points that integrate human rights into the climate agenda. He noted the need to promote gender equality in the climate negotiation processes. He said governments have legally binding obligations in relation to human rights and noted it is important that the guidelines for the implementation of the Paris Agreement, to be adopted at COP 24, promote participatory, inclusive and informed participation, especially in the framework of NDCs, adaptation, the transparency framework and the global stocktake.

30. A representative of the German Development Institute[20] presented a web tool[21] to connect climate action to the Sustainable Development Goals (SDGs). The tool analyses and compares how climate actions formulated in the NDCs correspond to each of the 17 SDGs. She pointed out that the NDCs include many climate activities that are relevant for simultaneously achieving multiple SDGs. For example, she noted climate activities can be attributed not only to SDG 13, related to climate action, but also to SDG 7 on affordable and clean energy, SDG 2 on zero hunger, SDG 15 on life on land and biodiversity, SDG 11 on sustainable cities and communities, SDG 6 on clean water and sanitation and SGD 17 on partnerships. She explained that the web tool enhances access to information, promotes transparency and fosters partnership among countries. She also explained that the tool reinforces the importance of policy coherence, as well as the need for meaningful and complementary responses between the 2030 Agenda for Sustainable Development and the Paris Agreement.

31. A representative of the Bulgarian Gender Research Foundation[22] presented good practices to foster women's access to information and communication technologies. She stated that one of the priorities of the Bulgarian Presidency of the European Union (EU) in the first part of 2018 was to empower women to be part of the digital economy. She highlighted that the information and communication technologies sector is the best performing sector in Bulgaria and employs around 20,000 people, 30 per cent of them women professionals, which is almost double the EU average for female representation.

32. She also shared information about SAME World (Sustainability Awareness Motivation Environment),[23] which is a project that includes 10 EU countries – Bulgaria, Estonia, Germany, Greece, Hungary, Italy, Portugal, Slovakia, Slovenia and Spain – and has partnerships with Kenya, Mozambique, Myanmar and the United Republic of Tanzania. She explained that the project aims to raise public awareness through education about climate change, environmental migration and environmental justice. The project resulted in an online platform and an educational kit that has been translated into 12 languages. In Bulgaria, the

[17] See http://www.un.org/documents/ga/conf151/aconf15126-1.

[18] See http://www.unece.org/env/pp/treatytext.html.

[19] See https://www.cepal.org/en/escazuagreement.

[20] See https://www.die-gdi.de/en.

[21] Available at https://klimalog.die-gdi.de/ndc-sdg.

[22] See https://www.esct-net.org/member/bulgarian-gender-research-foundation.

[23] http://www.sameworld.eu/en.

project has benefited more than 20,000 people, including local authorities, teachers, students, social organizations and media.

33. A representative of the secretariat mentioned the slogan "nothing about us without us". He said it represents a powerful concept used in the United Nations Convention on the Rights of Persons with Disabilities, and noted it should be applied in the climate change process as well. He pointed out that action under the Paris Agreement now lies with countries. He explained that to raise ambition, it is crucial to promote the participation of all those who feel committed and can act to address the climate challenge. He said that public participation is crucial at the national and international level and that therefore it is important to communicate on climate change without acronyms and in simple, understandable language.

4. Working group discussions and conclusions

34. Participants were divided into four working groups:

(a) Working group one discussed ways to encourage women, men, girls and boys from all walks of life to get involved and participate in local and national climate policy development and action;

(b) Working group two discussed different ways that information can be provided to ensure that women, men, girls and boys who may have difficulties due to illiteracy, disability, physical access barriers or language are able to receive and understand information on climate change;

(c) Working group three discussed a 'rights-based approach' to strengthen work on public participation and access to information on climate change at the local and national level;

(d) Working group four discussed international and regional cooperation to foster public access to information and public participation.

35. Working group one made population-specific suggestions. For children, it suggested that the wording and structure of climate change policy needs to be translated into easy-to-understand language with pictures and needs to use local dialect and context. The group indicated schools can play an important role in promoting the participation of students through climate change clubs and organizing student exchanges, competitions and extracurricular activities. The group mentioned young people need to feel a sense of ownership of climate change issues so as to be encouraged to look at what they can do in their lives and to find their own solutions. The group noted the importance of connecting climate change with issues relevant to young people, such as green and climate-friendly jobs and entrepreneurship.

36. The group stressed that to bring women's perspectives into environmental issues, women must be represented in the decision-making process, women need to be encouraged to document and tell their stories and training on gender issues should be available. The group explained civil society organizations could encourage public participation in climate policy and action by acting as a connection to the government, acting as facilitators and integrating climate change into existing initiatives that people already care about. It highlighted the importance of fostering the participation of women, indigenous peoples and youth and of engaging the private sector, community organizations, older people and the most vulnerable and poorest populations. It also stressed that organizing national climate dialogues could bring together government and non-Party stakeholders to discuss climate change policies.

37. Working group two stressed that access to information does not necessarily translate into meaningful participation. The group noted the difficulty of operationalizing access to information and public participation, both of which, it indicated, are rights. The group maintained that support and capacity are needed, along with identifying how to best influence the hardest to reach populations. Ways to create accessible information were discussed, including using culturally appropriate content and language; capitalizing on how information is already spread in a region; creating software applications for teens; and leveraging well-informed, trusted messengers, such as musicians and other artists. It was pointed out that children require interactive, face-to-face education and not just videos, and that consideration of spaces and timing to ensuring accessibility by women is important.

38. The theme of barriers to access emerged in the group's discussion. It noted that although respecting the right to isolation is important, reaching marginalized people is also important. The group identified illiteracy and disability as two categories of marginalization that are often overlooked, and explained that visual and audio impairments need to be considered in developing websites and written information about climate change.

39. The group also mentioned mental and attitudinal access barriers, including the fact that some teachers do not want to teach about climate change. The group maintained that climate science needs to be easily accessible and understood through creatively crafted messages based on findings in social science. The group suggested technology should be designed and deployed appropriately for the intended audiences, with consideration also given to how women receive and perceive the presented information and data. The group presented two complementary approaches: the bottom-up approach of empowering messengers, such as teachers, religious and cultural leaders, artists, actors and musicians, to share information and messages with their communities, and the top-down approach of integrating public participation and access to information into the rules for implementing the Paris Agreement to ensure or enable emphasis on public participation. The group indicated that support, including funding and capacity, are needed to identify how to best reach populations and to put that knowledge into practice.

40. Working group three identified the following challenges: lack of awareness of human rights-based approaches to climate change policy development and implementation; lack of knowledge among communities about their rights to participate; lack of involvement of women, indigenous peoples and local communities in consultations on projects and in decision-making; inadequate mechanisms for distributing information; lack of information in local languages; and insufficient funding.

41. The group recommended the following:

(a) Enhancing the participation of indigenous peoples, women, farmers, local communities, the elderly and young people in adaptation and mitigation projects and decision-making;

(b) Fostering capacity-building for policymakers, local leaders and communities in relation to the understanding and implementation of a human rights-based approach;

(c) Developing guidelines to support governments in integrating a human rights-based approach in the implementation of the Paris Agreement;

(d) Respecting traditional knowledge;

(e) Promoting dialogues between governments and stakeholders, for example in forums and round tables that provide an opportunity for local communities to express their views regarding climate policies and projects mobilizing funding, to foster public participation and access to information on climate change.

42. Working group four highlighted that international cooperation can strengthen and scale up action in various areas, such as enhancing the exchange of good practices and lessons learned among countries and non-Party stakeholders in intergovernmental processes related to public access to information and public participation. The group cited the Aarhus Convention, the Escazu Agreement and the Convention on the Elimination of All Forms of Discrimination against Women.[24] The group explained that in the framework of international conferences related to sustainable development, international cooperation can foster multi-stakeholder participation through consultations, side-events and parallel events. The group recalled that the Conference of Youth organized prior to COP 23 was a good example. The group noted that international cooperation policies offer additional opportunities to promote public participation and access to information through domestic consultations with civil society on the priorities and governance of official development assistance in donor countries, multi-stakeholder events to discuss official development assistance and international support, and the inclusion of guidelines or criteria related to local stakeholder consultations in any project implemented through international cooperation.

[24] See http://www.un.org/womenwatch/daw/cedaw/.

43. The group mentioned that lessons could also be learned from the private sector, especially on good practices and mechanisms used for community engagement and public consultations and in projects implemented by corporations. The group indicated that international norms can promote the transparency of private-sector actions, and that international cooperation has a key role in identifying the good practices, lessons learned and criteria that can serve as benchmarks for meaningful participation, including good practices in relation to national adaptation programmes of action and NDC preparation and implementation. The group recommended fostering communication and coordination among the ACE and gender focal points to promote gender mainstreaming, public participation and access to information at the national level.

D. Closure of the 6th Dialogue on Action for Climate Empowerment

44. The Deputy Executive Secretary of UNFCCC closed the Dialogue by stressing the importance of ACE and of the engagement of young people in the climate change architecture. He noted that the draft ACE decision agreed at SBI 48 is the first item of the Paris Agreement work programme agreed by Parties. He said that the Paris Agreement calls all to action. He encouraged participants to return to their engagements and help with meaningful action to implement the Agreement at all levels. He stressed that communicating and bringing information to the common person in countries, regions and communities around the world is extremely important. He explained it is about not only sharing information but also making it more meaningful. He invited participants to read the UNFCCC annual report,[7] which presents information on the state of climate change negotiations and on various climate change topics in a simplified, straightforward way.

45. In his closing remarks, the SBI Chair thanked the co-facilitators for their excellent work. He pointed out that the Dialogue had provided an opportunity to discuss Article 6 of the Convention and its elements, the role of ACE in the climate change process and especially the ways participants can integrate ACE into their own work and that of their governments and communities. He reiterated that having a good understanding of the role of ACE is important for the process, and he ended by inviting the participants to participate in the 7th Dialogue on Action for Climate Empowerment, which will take place in 2019 in Bonn.

46. The Dialogue was closed by Ms. Letellier, who thanked all presenters, speakers and participants for their active participation in and valuable contributions to the discussion. She highlighted the importance of building on the experiences and lessons learned on Article 6 of the Convention to scale up the implementation under Article 12 of the Paris Agreement. She concluded by stressing that the discussions in the Dialogue are also a contribution to the implementation of the gender action plan.

IV. Next steps

47. Parties and other stakeholders may wish to use the information contained in this report when planning, designing and implementing education and training activities in relation to climate change and international cooperation on those matters.

[7] Available at https://unfccc.int/resource/annualreport/.

Annex

Agenda for the 6th Dialogue on Action for Climate Empowerment

[English only]

Opening of the 6th Dialogue on Action for Climate Empowerment **Session I: public awareness and international cooperation thereon** Tuesday, 8 May 2018, from 4 p.m. to 7 p.m., Bonn, Germany World Conference Centre Bonn, room Santiago de Chile	
4 p.m. to 4.40 p.m.	Opening of the 6th Dialogue on Action for Climate Empowerment Welcoming remarks ▪ Ms. Patricia Espinosa, UNFCCC Executive Secretary ▪ Mr. Frank Bainimarama, COP 23 President and Prime Minister of Fiji ▪ Mr. Emmanuel Dlamini, Chair of SBI Group photo Outline and objectives by co-facilitators ▪ Mr. Paulo Jose Chiarelli, UNFCCC National Focal Point for Brazil and Ms. Emma Letellier, UNFCCC Gender Focal Point for France
Presentation of good practices and lessons learned on public awareness and international cooperation on this matter	
4.40 p.m. to 5 p.m.	**"Lessons learned on raising awareness and communication climate change"** ▪ **Jamie Clarke, Climate Outreach.** **"Feminist women-led approaches to social, Economic and climate justice"** ▪ **Ms. Maria Nailevu – DIVA for Equality PPGCCSD, PICAN, WGC, WMG.** ▪ "Efforts lead by young people in raising awareness and mobilizing climate action" YOUNGO Question and answer session
Methodology	
5 p.m. to 5.05 p.m.	Explanation on the methodology of the working groups by the co-facilitators
Working groups	
5.05 p.m. to 6.30 p.m.	Working groups' discussions on key topics
Conclusions of the working groups	
6.30 p.m. to 6.55 p.m.	Presentation of the working groups' conclusions and moderated dialogue among participants
Closing remarks	
6.55 p.m. to 7 p.m.	Closing remarks Session I: Public awareness and international cooperation on this matter

	• Mr. Paulo Jose Chiarelli, UNFCCC National Focal Point for Brazil and Ms. Emma Letellier, UNFCCC National Gender and Climate Change Focal Point for France
Day II: Public participation, public access to information and international cooperation on these matters **Wednesday**, 9 May 2018 from 4 p.m. to 7 p.m. Room: Santiago de Chile	
4 p.m. to 4.05 p.m.	Outline and objectives of session II by co-facilitators • Mr. Paulo Jose Chiarelli, UNFCCC National Focal Point for Brazil and Ms. Emma Letellier, UNFCCC National Gender and Climate Change Focal Point for France
Keynote speaker	
4.05 p.m. to 4.15 p.m.	Ms. Mary Robinson, former President of the Republic of Ireland and Chair of the Mary Robinson Foundation – Climate Justice
Presentation on good practices and lessons learned in fostering public participation and access to information	
4.15 p.m. to 5 p.m.	Presentations • "Respecting and promoting human rights in the implementation of the Paris Agreement" Mr. Benjamin Schachter, United Nations Human Rights Council • "Enhancing access to information through web tools on NDCs and SDGs" Ms. Hannah Janetschek, German Development Institute • "Access of women to information and communication technologies for their empowerment and the achievement of SDGs – Examples of good practices from Bulgaria" Ms. Elena Triffonova, Bulgarian Gender Research Foundation Questions and answers
Working groups	
5 p.m. to 6.20 p.m.	Working groups' discussions on key topics
Conclusions of the working groups	
6.20 p.m. to 6.50 p.m.	Presentation of the working groups' conclusions and moderated dialogue among participants
Closure of the 6th Dialogue on Action for Climate Empowerment	
6.50 p.m. to 7 p.m.	Closing remarks • Mr. Ovais Sarmad, Deputy Executive Secretary, UNFCCC • Mr. Emmanuel Dlamini, Chair of the SBI • Mr. Paulo Jose Chiarelli, UNFCCC National Focal Point for Brazil and Ms. Emma Letellier, UNFCCC National Gender and Climate Change Focal Point for France

United Nations FCCC/SBI/2018/20

Framework Convention on Climate Change

Distr.: General
19 October 2018

Original: English

Subsidiary Body for Implementation
Forty-ninth session
Katowice, 2–8 December 2018

Item 4(b) of the provisional agenda
Reporting from Parties not included in Annex I to the Convention
Work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention

Progress of work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention

Report by the secretariat

Summary

This report summarizes the progress of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) in implementing its workplan for 2018. It covers the proceedings and outcomes of the two meetings of the CGE held in 2018, at which the CGE discussed its key areas of work for 2018, considered progress in implementing its workplan for 2018 and assessed its major achievements and lessons learned in implementing its work programme for 2014–2018.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), by decision 19/CP.19, decided to continue the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) for a period of five years, from 2014 to 2018.

2. COP 19 requested the CGE to submit a progress report on its work annually to the Subsidiary Body for Implementation (SBI) for consideration at the sessions of the SBI held in conjunction with the sessions of the COP.[1]

3. COP 19 also requested the secretariat to facilitate the work of the CGE by organizing its meetings and workshops and compiling reports thereon for consideration by the SBI.[2]

B. Scope

4. This report provides an overview of the implementation by the CGE of its 2018 workplan, covers the proceedings of its 20th and 21st meetings and takes stock of the implementation of its work programme for 2014–2018, including key achievements, lessons learned and challenges encountered.

5. Two other reports capturing the outcomes of key activities of the CGE undertaken in 2018 have also been prepared for consideration at SBI 49:

(a) A report on the regional hands-on training workshops on identifying adaptation actions and reporting them in national communications (NCs) (see paras. 11 and 12 below);[3]

(b) A report on the regional hands-on training workshop on the preparation and reporting of information on mitigation actions in NCs and biennial update reports (BURs) for the Latin American and Caribbean region (see paras. 13 and 14 below).[4]

C. Possible action by the Subsidiary Body for Implementation

6. The SBI, having considered this report and the two reports referred to in paragraph 5 above, is invited to take note of the progress of the CGE in implementing its work programme for 2014–2018, and to provide further guidance, as appropriate, to the CGE.

7. Further, the SBI may wish to take into account the information contained in this report in considering the review of the term and mandate, including the terms of reference, of the CGE with a view to recommending a draft decision thereon for consideration and adoption at COP 24.

II. Proceedings of the 20th and 21st meetings of the Consultative Group of Experts

8. The 20th meeting of the CGE was held in Bonn, Germany, on 5 and 6 February 2018. Twenty-one members participated in the meeting,[5] as well as an observer from

[1] Decision 19/CP.19, paragraph 7.
[2] Decision 19/CP.19, paragraph 9(a).
[3] FCCC/SBI/2018/21.
[4] FCCC/SBI/2018/14.
[5] Members from Algeria, Bangladesh, Brazil, Canada, China, Colombia (remote participation), the Congo, Cuba, the European Union, France, Germany, India, Japan, Kenya, Saudi Arabia, Singapore, the Sudan and the United States of America (remote participation), and three experts representing international organizations (the Intergovernmental Panel on Climate Change, United Nations

Azerbaijan representing Parties not included in Annex I to the Convention (non-Annex I Parties) from the Eastern European region, who was invited in accordance with the conclusions of COP 19.[6] Mr. Thiago de Araujo Mendes (Brazil) was elected as the Chair of the CGE and Mr. Gervais Ludovic Itsoua Madzous (Congo) as the Rapporteur, both for a term of one year. The CGE reviewed, revised and finalized its workplan for 2018.[7]

9. The 21st meeting of the CGE was held in Asunción, Paraguay, on 21 and 22 September 2018. Sixteen members participated in the meeting.[8] The CGE took stock of progress in implementing its workplan for 2018. It also took stock of the key activities implemented in 2014–2018 with a view to identifying key achievements, lessons learned and constraints in implementing its work programme.

10. The progress of the CGE in implementing its activities planned for 2018 is described in detail in chapter III below, including operational details of some of the key activities. Chapter IV below contains an overview of activities implemented and main achievements under the work programme of the CGE for 2014–2018.

III. Progress of the Consultative Group of Experts in implementing its workplan for 2018

A. Technical advice and support for the preparation of national communications and biennial update reports

1. Regional hands-on training workshops on identifying adaptation actions and reporting them in national communications

11. The CGE, with the assistance of the secretariat, conducted in 2018 three regional hand-on training workshops on identifying adaptation actions and reporting them in NCs:[9]

(a) For the African region, held in Lomé, Togo, from 23 to 26 July;

(b) For the Latin American and Caribbean region, held in Asunción from 17 to 20 September;

(c) For the Asia-Pacific and Eastern European regions, held in Kathmandu, Nepal, from 8 to 11 October.

12. The objectives of the workshops were:

(a) To enhance the technical knowledge of national experts from developing countries on the science, methods and tools necessary to conduct vulnerability and adaptation assessment and translate the results into adaptation actions;

(b) To further their understanding of what and how to prepare and report in NCs information on vulnerability and adaptation assessment and the identification and implementation of adaptation actions;

(c) To serve as a platform for exchanging views, lessons learned and experience, and networking.

Development Programme and United Nations Environment Programme).

[6] FCCC/CP/2013/10, paragraph 131.

[7] Available at https://unfccc.int/sites/default/files/resource/CGE_workplan_2018.pdf.

[8] Members from Brazil, Canada (remote participation), China, the Congo, Cuba, the European Union (remote participation), Germany, India, Japan, Kenya (remote participation), Saudi Arabia, Singapore, South Africa and Uruguay, and two experts representing international organizations (the Intergovernmental Panel on Climate Change and United Nations Environment Programme).

[9] See document FCCC/SBI/2018/21 for the detailed report on the workshops.

2. Regional hands-on training workshops on the preparation and reporting of information on mitigation actions in national communications and biennial update reports

13. At its 20th meeting the CGE noted that, owing to insufficient financial resources, the regional hands-on training workshop on the preparation and reporting of information on mitigation actions in NCs and BURs for the Latin American and Caribbean region had not been held in 2017. The CGE also noted that there were sufficient funds available in 2018 to conduct the workshop. Subsequently, the workshop was held, with the assistance of the secretariat, in Panama City, Panama, from 24 to 27 July 2018.[10]

14. The objectives of the workshop were:

(a) To enhance the capacity of national experts in using the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention" (hereinafter referred to as the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties) and the "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" to facilitate their preparation and reporting of information on mitigation actions in their countries' NCs and BURs;

(b) To serve as a platform for exchanging views, lessons learned and experience relating to the process and preparation of NCs and BURs, as appropriate.

3. Regional hands-on training workshops on the building of sustainable national greenhouse gas inventory management systems and the use of the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*

15. At its 21st meeting the CGE noted its contribution of resource persons to two regional hands-on training workshops on the building of sustainable national greenhouse gas (GHG) inventory management systems and the use of the Intergovernmental Panel on Climate Change (IPCC) *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines)[11]:

(a) The workshop for the Latin American and Caribbean region, held in Montevideo, Uruguay, from 21 to 25 May 2018;

(b) The workshop for the Asia-Pacific and Eastern European regions, held in Beijing, China, from 20 to 24 August 2018.

16. The workshops were organized by the secretariat in collaboration with the IPCC, the Food and Agriculture Organization of the United Nations (FAO) and the Global Research Alliance on Agricultural Greenhouse Gases. The CGE made several presentations on the 2006 IPCC Guidelines.

17. The participants expressed their appreciation to the secretariat for organizing the workshops. Their level of satisfaction with the content and organization was high. They acknowledged the usefulness of the training and requested additional hands-on training opportunities, including in the form of e-courses.

18. The materials used for the workshops will be translated into Portuguese with the support of the Global Support Programme for Preparation of National Communications and Biennial Update Reports by non-Annex I Parties (GSP).

4. Webinars

19. The CGE continued to organize webinars to reach a broad audience of practitioners with the aim of providing a platform for them to focus on learning about specific methods or tools, supplementing the level of technical detail covered in the hands-on training workshops across all substantive themes covered in NCs and BURs, namely GHG inventories, mitigation, vulnerability and adaptation, and support.

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[10] See document FCCC/SBI/2018/14 for the detailed report on the workshop.

[11] Such a workshop was also held for the African region in Lusaka, Zambia, from 4 to 8 June 2018; no resource person from the CGE attended it.

20. The CGE webinar series in 2018 focused on:

(a) How at the national level the current measurement, reporting and verification (MRV) arrangements can be better implemented under the Convention;

(b) How countries can better showcase their climate mitigation and adaptation actions in their NCs and BURs;

(c) Methodologies used and tools available for mitigation assessment, adaptation and vulnerability assessment, and national GHG inventories;

(d) Lessons learned and good practices from developing countries in preparing their NCs and BURs.

21. As at September 2018 the CGE had conducted seven thematic webinars of 45 minutes each in English. The presentations from and recordings[12] of each of the webinars are available via the CGE website.[13] Some of the materials were made available in Spanish or French. A total of 352 experts participated in the webinars. As part of its outreach activities, the CGE, with the support of the secretariat, has periodically reported on the availability of the materials to stakeholders.

22. The CGE collaborated with external experts and international organizations to conduct the webinars (see paras. 50–59 below), which enabled the participants, including national government representatives, researchers and technical specialists, to learn from and engage with the resource persons provided.

B. Support for the technical analysis of biennial update reports

1. Training programme for teams of technical experts

23. COP 19, by decision 20/CP.19, adopted the composition, modalities and procedures of the team of technical experts (TTE) under international consultation and analysis (ICA). It requested the CGE to develop and organize appropriate training programmes for nominated technical experts, taking into account annexes III and IV to decision 2/CP.17, based on the most up-to-date training materials of the CGE.[14] As mandated and as per its workplan, the CGE developed a training programme in 2014–2015.

24. The CGE training programme for experts undertaking the technical analysis of BURs was rolled out in April 2015 and converted to a web-based e-course training programme[15] in June 2015. Since then the programme has been offered to experts nominated to the UNFCCC roster of experts by Parties included in Annex I to the Convention (Annex I Parties) and non-Annex I Parties. The seventh and eighth rounds of the training programme were offered in 2018. In the seventh round, 73 experts (40 from non-Annex I Parties and 33 from Annex I Parties) passed one or more exams.[16]

25. As agreed at its 20th meeting, the CGE updated the four modules in cluster 1, "Provisions on reporting information in BURs and conducting technical analysis of BURs under the ICA process", of the TTE training materials, mainly to incorporate the experience, lessons learned and observations from the implementation of the ICA process thus far. Module 1 of the updated materials was used for the eighth round of the training programme; the remaining modules will be used for subsequent rounds.

[12] Available at https://www.youtube.com/channel/UCJlvsGJAR8Nsty1ZuBf_cQg.

[13] https://unfccc.int/process-and-meetings/bodies/constituted-bodies/consultative-group-of-experts-on-national-communications-from-parties-not-included-in-annex-i-to-the/cge-webinar-series.

[14] Decision 20/CP.19, paragraphs 1 and 4.

[15] https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-convention/training-review-experts.

[16] The eighth round of the training programme was launched on 3 September 2018, with the assessment period to be held from 16 to 19 October 2018.

2. Periodic advice on the composition of teams of technical experts

26. Consistently with its mandate, the CGE provides periodic advice to the secretariat on selecting TTE members. The secretariat is mandated to report to the CGE on the composition of TTEs on a semi-annual basis.[17]

27. As at June 2018 the secretariat had organized 10 rounds of the technical analysis of BURs, covering 52 BURs from 42 non-Annex I Parties, including 13 second BURs. A total of 138 experts from both Annex I and non-Annex-I Parties, including current and former CGE members, participated in the technical analysis as members of TTEs.

28. The TTEs were composed following the selection criteria defined in the annex to decision 20/CP.19; the secretariat also considered advice from the CGE in composing the TTEs.

29. At its 21st meeting the CGE noted that, while there are challenges in securing experts for the BUR analyses, due to the unpredictability of BUR submissions, the secretariat has managed to compose the TTEs thus far for the technical analyses of submitted BURs. However, the CGE highlighted that should the submissions of the BURs increase significantly, this challenge will be amplified.

3. Survey of national experts from Parties that had participated in the technical analysis of biennial update reports

30. At its 20th meeting the CGE agreed to conduct a survey to seek feedback from national focal points and national experts from 39 non-Annex I Parties that had participated in the technical analysis of BURs with a view to understanding opportunities to further improve the efficiency and effectiveness of the process defined in decision 20/CP.19.

31. At its 21st meeting the CGE took note of the report on the survey.

32. The feedback from Parties on the use of the thematic checklist as a tool for the technical analysis process was overwhelmingly positive. It clearly outlines the reporting provisions that were negotiated and agreed upon by Parties, and provides a structure that enables the Parties to understand how the TTE uses the reporting provisions as the basis for conducting a technical analysis. Some members of the CGE acknowledged the need to further enhance the thematic checklist by clarifying the nature of the reporting provisions, in terms of whether they are "shall", should", or "encouraged".

C. Online training resources

1. E-learning courses

33. The e-learning courses that were developed and released on the UNFCCC Learning Management System are fully operational.[18] They cover vulnerability and adaptation assessment, mitigation assessment and national GHG inventories.

34. Currently the e-learning courses are only available in English. The CGE noted the value of making the online training courses available in other United Nations languages.

35. As at 20 August 2018, 684 participants had registered for the e-learning courses.

36. The availability of the e-learning courses has been shared with a wide audience through webinar announcements and also through outreach efforts of the secretariat on behalf of the CGE.

2. Interactive online platform

37. The long-term strategy of the CGE formulated in 2014 included enhancing interaction between CGE members and their constituencies as part of its communication

[17] Decision 20/CP.19, annex, paragraph 2.

[18] Available at https://climate.csod.com/client/climate/default.aspx.

and outreach efforts. Accordingly, the CGE, with the assistance of the secretariat, created a web-based online platform called the e-Network.[19]

38. The e-Network allows users to access relevant information on the preparation of NCs and BURs, search a database of experts, pose questions to the CGE and participate in online discussion forums.

39. The e-Network also provides a platform for disseminating discussion questions and answers from CGE webinars.

40. The CGE encourages national experts and other stakeholders involved in the preparation of NCs and BURs to make use of the e-Network.

D. Other activities

1. Technical assessment of submissions from Parties on their proposed forest reference emission levels and/or forest reference levels

41. As per decision 13/CP.19, annex, paragraph 9, a CGE member participated as an observer in the technical assessment of the submissions from Parties on their proposed forest reference emission levels and/or forest reference levels, held in Bonn from 19 to 23 May 2018.

42. At its 21st meeting, the CGE noted the need to keep a record of its participation in order to ensure that the lessons learned by Parties could contribute to the work of the CGE.

2. Integration of gender considerations into the work of the Consultative Group of Experts

43. At its 20th meeting the CGE noted the gender action plan adopted at COP 23[20] and acknowledged the importance of mainstreaming the gender perspective in its work. As part of its gender mainstreaming activities, in 2018 the CGE:

(a) Encouraged women's participation in its regional hands-on training workshops;

(b) Included consideration of gender mainstreaming in its webinars;

(c) Integrated gender mainstreaming into its training materials and workshops;

(d) Developed case studies on good practices for gender mainstreaming in national reports;[21]

(e) Started maintaining, where available, gender-related statistics of participation in CGE activities (see figure 2).

E. Cooperation and collaboration

44. The CGE notes the importance of participating in the activities of and communicating with other constituted bodies and expert groups. Such participation and communication helps in identifying activities that are cross-cutting in nature and exploring synergies and opportunities for collaborating on their respective activities and/or complementing each other's work, especially related to the capacity-building of non-Annex I Parties in the area of MRV.

1. Constituted bodies

(a) Paris Committee on Capacity-building

45. The CGE participated as an observer in the 2nd meeting of the Paris Committee on Capacity-building (PCCB), held in Bonn from 3 to 5 May 2018.[22] The CGE made an

[19] http://www4.unfccc.int/sites/Enet.

[20] Decision 3/CP.23.

[21] The material will be available by December 2018.

[22] See https://unfccc.int/pccb.

intervention highlighting its interest in the 2018 focus area of the PCCB and indicating that the CGE sees a strong relationship between its work on MRV and the implementation of nationally determined contributions, particularly with respect to the technicalities involved in preparing and tracking nationally determined contributions. The CGE also highlighted that it is ready to engage with the PCCB to explore opportunities for synergy and to complement each other's work, and indicated its readiness to work with the four working groups of the PCCB.

46. The CGE nominated two members as focal points to the PCCB and agreed to continue providing input to the PCCB through the focal points. The CGE also agreed to participate in future activities organized by the PCCB.

(b) Standing Committee on Finance

47. The CGE noted with appreciation the outreach of the Standing Committee on Finance, whereby it shared its workplan with the CGE.

(c) Stocktake on pre-2020 implementation and ambition

48. The COP 23 President and the COP 24 President Designate invited the CGE to submit, by 1 October 2018, concise written input to the stocktake on pre-2020 implementation and ambition that will be convened at COP 24.

49. The CGE made a submission for the stocktake on pre-2020 implementation and ambition, which identified how the CGE is supporting non-Annex I Parties on this matter.[23]

2. Intergovernmental organizations

(a) Global Support Programme for Preparation of National Communications and Biennial Update Reports by non-Annex I Parties

50. At the 20th and 21st meetings of the CGE, the CGE members from the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) provided an update on the progress of implementation of the GSP.

51. The GSP is assisting the CGE in compiling information on existing activities and programmes to facilitate and support the preparation of NCs and BURs, and steps for integrating climate change considerations into relevant social, economic and environmental policies and actions.

52. The GSP supported the CGE in developing good practice guidance on integrating gender considerations into NC reporting (see para. 51 above) and translating into Portuguese the CGE training materials on the 2006 IPCC Guidelines (see para. 18 above).

53. The GSP has contributed resource persons to CGE webinars, who shared their knowledge on matters related to gender and GHG inventories.

(b) Intergovernmental Panel on Climate Change

54. The CGE and the IPCC, through the Technical Support Unit of the IPCC Working Group II, collaborated on the three regional hands-on training workshops on adaptation (see para. 11 above). Experts from the IPCC Working Group II provided an overview of the IPCC Fifth Assessment Report (AR5) in a dedicated session entitled, "Overview of global landscape of climate change: key results from the work of the IPCC Working Group II."

55. In addition, the CGE and the IPCC collaborated in organizing the regional hands-on training workshops on sustainable national GHG inventory management systems and the use of the 2006 IPCC Guidelines (see para. 15 above).

[23] The submission is available at https://unfccc.int/topics/pre-2020.

(c) Food and Agriculture Organization of the United Nations

56. FAO led a session on sectoral vulnerability and adaptation assessment, planning and implementation, with a focus on agriculture, at the three regional hands-on training workshops on adaptation (see para. 11 above). FAO also contributed resource persons to a relevant CGE webinar.

(d) United Nations Development Programme

57. The UNDP National Adaptation Plan Global Support Programme led a session at the regional hands-on training workshops on adaptation for the African region (see para. 11 above) on translating sectoral vulnerability and adaptation assessment results into national policies and plans.

(e) World Health Organization

58. The World Health Organization (WHO) led a session at two regional hands-on training workshops on adaptation (see para. 11 above) on sectoral vulnerability and adaptation assessment, planning and implementation, with a focus on human health. It also contributed a resource person to a relevant CGE webinar.

3. International organizations

59. In addition to the intergovernmental organizations listed above, the CGE has also collaborated with a number of other international organizations, primarily engaging their experts as resource persons for its webinars and regional hands-on training workshops, including the Alliance for Global Water Adaptation, Deltares, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Hungarian National Adaptation Center, the Korea Adaptation Center for Climate Change and Winrock International.

IV. Stocktake of the implementation of the work programme of the Consultative Group of Experts for 2014–2018

60. This chapter provides an overview of the activities and achievements of the CGE under its work programme for 2014–2018. It includes information on the cooperation and collaboration that the CGE has undertaken with partners to implement its work programme successfully.

A. Technical assistance and support for the preparation of national communications and biennial update reports

61. One of the core mandates of the CGE from the COP is to provide technical assistance and support to non-Annex I Parties to facilitate the process and preparation of their NCs and BURs in accordance with the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties contained in the annex to decision 17/CP.8 and the "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" contained in annex III to decision 2/CP.17. In response, the CGE has undertaken several activities, which broadly fall into three clusters:

(a) Developing, updating and disseminating training materials and technical tools;

(b) Conducting regional hands-on training workshops and a training programme for TTEs;

(c) Setting up and operationalizing online training resources, such as the e-learning programme, e-Network and webinars.

1. Understanding the capacity-building needs of developing country Parties

62. In accordance with decision 19/CP.19, annex, paragraph 2(a) and (g), the CGE prepared a technical report[24] in 2014 that included compiled and synthesized information on problems and constraints, lessons learned and best practices identified in the process and preparation of NCs and BURs by developing country Parties. With a view to complementing the compiled information with more up-to-date information, the CGE prepared an updated technical report[25] in 2017. The reports have informed the work of the CGE in identifying and providing technical assistance to address the needs of developing country Parties and served as a source of lessons learned and best practices for those Parties.

2. Training materials

63. The CGE has continued to update its training materials[26] in order to incorporate feedback and suggestions from those who have attended training workshops or utilized the training materials, and to reflect the most recent science and any developments in the reporting of developing country Parties under the Convention, thus maintaining relevance and value to the target audience. The CGE has developed and disseminated training materials to facilitate the preparation of national reports and to support training workshops.

64. In 2005 a set of training materials for the preparation of NCs was developed on vulnerability and adaptation assessment, national GHG inventories and mitigation assessment. In 2013 another set of supplementary training materials for the preparation of BURs was developed, on institutional arrangements, mitigation actions and their effects, and constraints and gaps and related financial, technical and capacity-building needs and support received, to address the reporting elements within the scope of BURs. In 2014 the training materials on the preparation of BURs were translated into Arabic, French and Spanish.

65. The CGE updated its existing training materials on vulnerability and adaptation assessment in 2014–2015. The update took into account the recent developments under the Convention and the latest science, in particular the findings contained in the AR5.

66. The CGE, in collaboration with the IPCC, made available online training materials on the 2006 IPCC Guidelines in 2017. These covered all sectors of the 2006 IPCC Guidelines, namely energy, industrial processes and product use, agriculture, forestry and other land use, and waste. In collaboration with the GSP the training materials were translated into Portuguese.

67. The CGE updated two training materials on BURs in 2017, one on reporting information on mitigation actions and their effects and the other on reporting information on constraints and gaps, and related financial, technical and capacity-building needs and support received. The updates ensured that the training materials developed in 2013 were aligned with the materials used for the programme, developed in 2015, to train technical experts to undertake the technical analysis of BURs.

3. Training workshops

68. Since 2014 the CGE, with the assistance of the secretariat and financial and technical support provided by Parties and international organizations, has organized 15 regional hands-on training workshops, of which 6 focused on the preparation of BURs, 6 on vulnerability and adaptation assessment and 3 on the preparation and reporting of information on mitigation actions. Further, CGE members participated as resource persons in the eight regional hands-on training workshops organized by the secretariat in 2015 (one), 2016 (three), 2017 (two) and 2018 (two), in collaboration with the IPCC, on building

[24] FCCC/SBI/2014/INF.16.

[25] FCCC/SBI/2017/16.

[26] Available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/consultative-group-of-experts-on-national-communications-from-parties-not-included-in-annex-i-to-the/cge-training-materials.

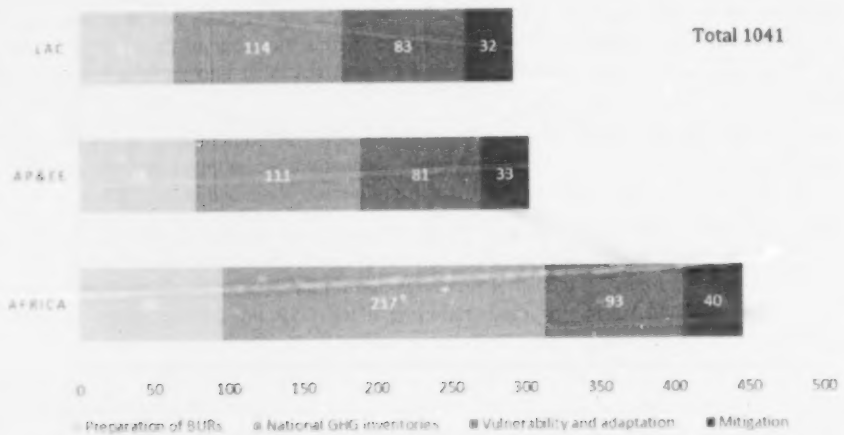
sustainable national GHG inventory management systems and the use of the 2006 IPCC Guidelines. A total of 1,041 national experts from developing country Parties have been trained through these workshops. Figure 1 shows the number of participants by region and thematic area, while figure 2 shows disaggregated numbers of participants by gender for each region.

69. The workshops provided an opportunity for the participants to share experience and views and to build a network of experts. Furthermore, they served as a platform for generating feedback on the training materials in order to improve them further.

70. According to the post-workshop survey results,[27] most surveyed participants found the quality of the regional hands-on training workshops to be either excellent (56 per cent on average across the 15 regional hands-on training workshops) or good (39 per cent on average), as shown in figure 3. The feedback and lessons learned from the training workshops allowed the CGE to identify a number of areas for enhancing the design and delivery of technical assistance to developing country Parties, including encouraging participants to strengthen their institutional arrangements through the training workshops and ensuring that experience, lessons learned and best practices from developing countries feature prominently in the content of CGE training materials and workshops.[28]

Figure 1

Regional hands-on training workshops in 2014–2018: number of participants by region and thematic area

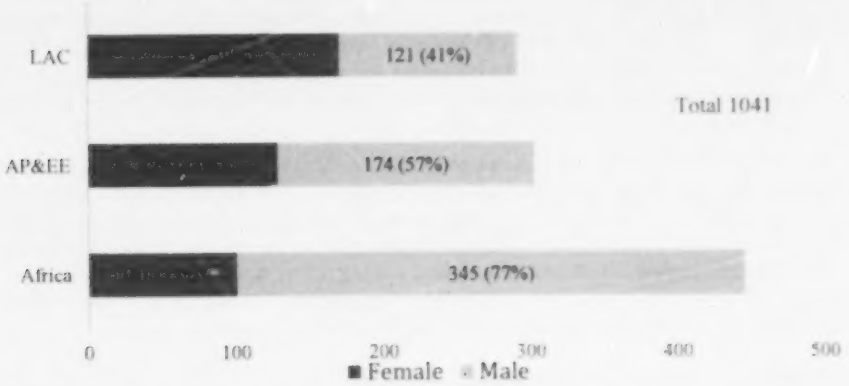


Abbreviations: LAC = Latin American and Caribbean region, AP&EE = Asia-Pacific and Eastern European region, BUR = biennial update report, GHG = greenhouse gas.

[27] These results are for workshops organized by the CGE.

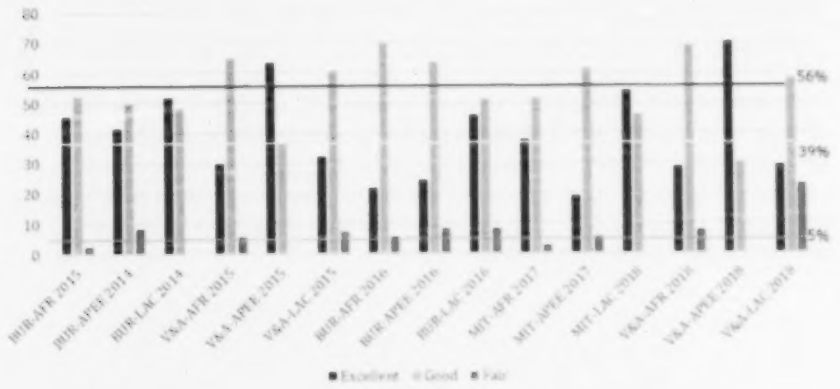
[28] See document FCCC/SBI/2016/16, paragraph 85.

Figure 2
Regional hands-on training workshops in 2014–2018: number of participants by region and gender



Abbreviations: AP&EE = Asia-Pacific and Eastern European regions, LAC = Latin American and Caribbean region.

Figure 3
Participants' assessment of the quality of the regional hands-on training workshops in 2014–2018



Abbreviations: AFR = Africa, APEE = Asia-Pacific and Eastern European regions, BUR = biennial update report, LAC = Latin American and Caribbean region, MIT = mitigation assessment, V&A = vulnerability and adaptation assessment.

B. Support for the technical analysis of biennial update reports

1. Training materials

71. In accordance with decision 19/CP.19, annex, paragraph 2(i), in 2014–2015 the CGE developed a training programme for the technical experts nominated to the UNFCCC roster of experts, who, upon successful completion of the training, become eligible to be part of a TTE and undertake the technical analysis of BURs. The primary objective of the training programme is to ensure that the experts nominated on the UNFCCC roster of experts are fully conversant with the relevant reporting requirements for developing country

Parties and the modalities and procedures for the ICA process, including the technical analysis of BURs from developing country Parties.

72. Also in 2014 the CGE organized a workshop on the peer review of the materials for training TTEs as an opportunity for experts to review the draft training materials and provide feedback. A total of 49 experts from developed and developing country Parties attended, drawn from the UNFCCC roster of experts and former and current CGE members. The CGE took stock of the comments and suggestions received from the experts over the course of the workshop, which contributed to the finalization of the training programme.

73. Further, in 2017 the CGE developed a technical tool to facilitate developing country Parties' preparation for and participation in ICA.[29] The tool was developed taking into account experience, lessons learned and feedback from the first eight rounds of the technical analysis of BURs and the three workshops for the facilitative sharing of views. It provides information on the process-related aspects of ICA, identifies the key steps, documents and tools used in ICA, and outlines the roles and responsibilities of the various actors involved, including guidance to facilitate efficient participation.

2. Training programme for teams of technical experts

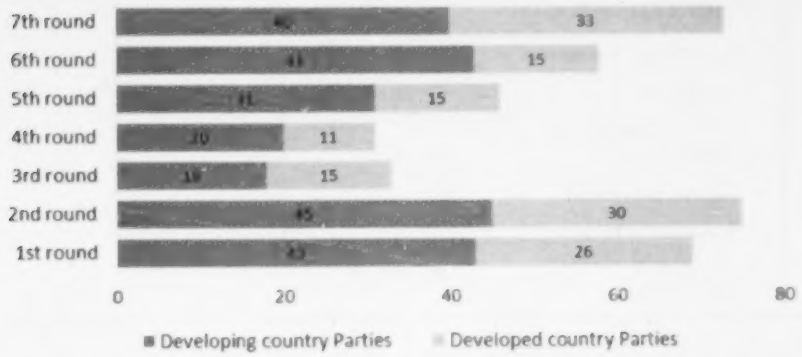
74. The CGE training programme for TTEs undertaking the technical analysis of BURs was rolled out in April 2015 and converted to a web-based self-learning training programme in June 2015, hosted on the UNFCCC Learning Management System. Since then the secretariat has organized eight rounds of training for experts nominated on the UNFCCC roster of experts. After a period of self-learning, proficiency assessments are offered. Upon successful completion of the course, experts are issued with a certificate and are qualified to be part of a TTE. During the seven rounds of training in 2015–2018,[30] a total of 385 experts, from developed and developing country Parties, passed one or more proficiency assessments. Figure 4 shows the number of experts who passed one or more proficiency assessments in each round. Considering the number who participated in more than one round of training (those not able to meet the threshold set for passing the proficiency assessment), the actual number of experts who passed one or more proficiency assessments is 316. A total of 236 experts became qualified to be part of a TTE.

75. In 2018 four modules of cluster 1 of the TTE training materials, titled, "Provisions on reporting information in the BURs and conducting technical analysis of BURs under the ICA process", were updated to include experience, lessons learned and observations from the implementation of the ICA process so far.

[29] Available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/consultative-group-of-experts-on-national-communications-from-parties-not-included-in-annex-i-to-the/cge-training-materials/international-consultation-and-analysis-for-non-annex-i-parties.

[30] The eighth round of training is under way and will be completed by October 2018.

Figure 4
Training for experts nominated on the UNFCCC roster of experts in 2015–2018: number of experts who passed one or more proficiency assessments in each round



3. Online training resources

76. On the basis of the CGE training materials, the secretariat developed an e-learning programme on the preparation of NCs from developing country Parties. The e-learning courses were released in March 2015 and are accessible through open and free registration on the UNFCCC Learning Management System. The CGE updated the look and feel of the e-learning courses in 2016. The current e-learning programme contains courses on introduction and overview, national GHG inventories, mitigation assessment, vulnerability and adaptation and cross-cutting issues, with each course comprising a range of lessons (see table 1). A total of 684 participants had registered for the programme as at August 2018.

Table 1
Consultative Group of Experts e-learning courses and lessons therein

Introduction and overview	*National greenhouse gas inventories*	*Vulnerability and adaptation assessment*	*Mitigation assessment*	*Cross-cutting issues*
Introduction	Background on national greenhouse gas inventories	Overview of vulnerability and adaptation assessment	Mitigation in the context of national communications	Other information considered relevant to the achievement of the objective of the Convention
Overview of the UNFCCC reporting requirements for non-Annex I Parties	Building sustainable national greenhouse gas inventory management systems	Socioeconomic scenarios	Mitigation assessment: concepts, structure and steps	Institutional arrangements
	Methodological and data choices	Climate change scenarios	Mitigation options, issues and barriers by sector	
	Performing key category analysis	Water resources	Mitigation analysis methods and tools	
	Addressing data gaps	Human health	Reporting on mitigation in national communications	
	The Intergovernmental Panel on Climate Change emission factor database	Coastal resources		

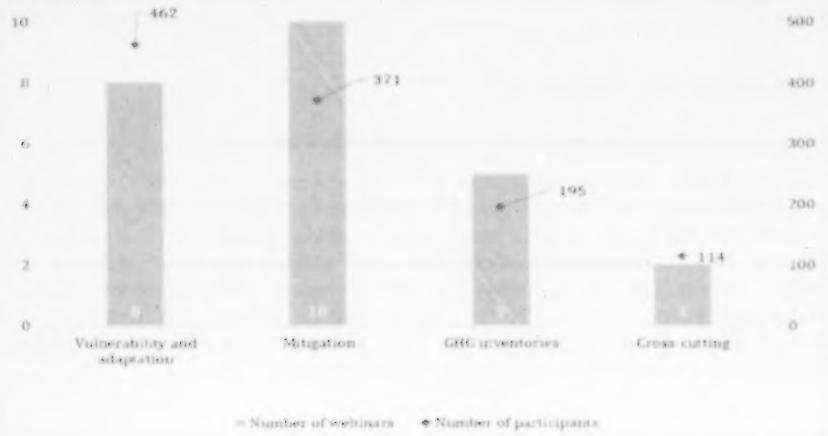
Introduction and overview	*National greenhouse gas inventories*	*Vulnerability and adaptation assessment*	*Mitigation assessment*	*Cross-cutting issues*
	Quality assurance/quality control and verification	Agriculture		
	Uncertainty assessment			
	Energy sector			
	Industrial processes sector			
	Agricultural sector			
	Land use, land-use change and forestry			
	Waste sector			

77. With a view to enhancing interaction between CGE members and the constituencies under the Convention as part of its communication and outreach efforts, the CGE, with the assistance of the secretariat, created a web-based platform called the e-Network. The e-Network provides implementation updates and news, and allows users to access technical resources relevant to the preparation of NCs and BURs, search a database of experts in the areas of NCs and BURs, and interact with the CGE and other experts through online discussion forums. Since the launch of the e-Network in 2015, the CGE has continued to update the information on the site on a regular basis in close collaboration with UNDP, UNEP and the IPCC.

78. The CGE has conducted webinars aimed at building the momentum of its capacity-building initiatives and addressing specific issues related to the process and preparation of NCs and BURs. The webinars provide a platform for the CGE to reach out to a wider audience of national experts and practitioners and to assist them in gaining targeted knowledge in thematic areas. The CGE has collaborated with external experts and international organizations, including the GSP, the IPCC, Organisation for Economic Co-operation and Development, FAO and WHO, in conducting webinars. In 2015–2018 the CGE conducted 25 webinars, enabling a total of 1,142 participants, including national government representatives, researchers and technical specialists, to learn from and engage with experts remotely. Figure 5 presents the number of webinars and participants by thematic focus in 2015–2018.

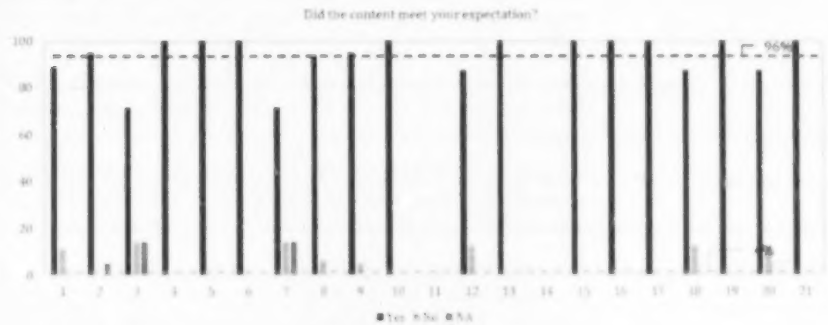
79. The CGE has conducted post-webinar surveys since 2016. According to the survey results on the 21 webinars conducted between 2016 and 2018, 96 per cent of the surveyed participants indicated that the content of the webinars met their expectations, as shown in figure 6.

Figure 5
Number of Consultative Group of Experts webinars and participants by theme in 2015–2018



Abbreviation: GHG = greenhouse gas.

Figure 6
Participants' assessment of the quality of the Consultative Group of Experts webinars in 2016–2018



Note: No feedback was received on webinars 11 and 14 through the surveys.

4. Other activities

80. In response to decision 19/CP.19, annex, paragraph 2(d), the CGE prepared an analytical paper[31] that provides recommendations on elements to be considered in a future revision of the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties, as well as suggestions aimed at clarifying the guidelines in order to facilitate reporting by developing country Parties. In preparing the paper the CGE took into consideration the inputs provided by developing country Parties through a survey conducted between September 2015 and January 2016 on challenges faced in using, and possible improvements to, the existing guidelines, and information contained in relevant reports prepared since 2011, including workshop reports and other technical reports.

81. In line with decision 19/CP.19, annex, paragraph 2(h), the CGE provided guidance and periodic advice to the secretariat to assist it in fulfilling the selection criteria for the composition of TTEs. In 2016 the CGE established a task force, consisting of 10 CGE

[31] FCCC/SBI/2016/17.

members, to undertake an in-depth analysis of the challenges faced in composing TTEs to undertake technical analyses of BURs and to identify and recommend solutions to respond to or mitigate the constraints and challenges identified. In 2017 the task force prepared a technical report[32] containing its analysis, findings and recommendations on composing TTEs.

C. Cooperation and collaboration

1. Other expert groups and constituted bodies under the Convention

82. The CGE notes that its participation in the activities of other expert groups and constituted bodies under the Convention is important in helping to link their various activities that are cross-cutting in nature and to explore opportunities for conducting activities jointly and/or complementing each other's work, especially related to the capacity-building of developing country Parties. As a result, the CGE has made continuous collaboration efforts (see table 2). In addition, through its webinars, workshops and members, the CGE has explored opportunities to make use of and disseminate relevant information developed by the various other constituted bodies.

Table 2
Collaboration of the Consultative Group of Experts with other expert groups and constituted bodies under the Convention in 2014–2018

Entity	*Key collaborative activities*
Adaptation Committee (AC)	A member of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) participated in a workshop on experience, good practices, lessons learned, gaps and needs in the process to formulate and implement national adaptation plans (NAPs), organized by the AC in collaboration with the Least Developed Countries Expert Group in 2015
	The CGE collaborated extensively with the AC in updating the CGE training materials on vulnerability and adaptation assessment over the course of 2015
	AC members participated in CGE webinars on vulnerability and adaptation assessment and coastal resources as resource persons in 2016 and 2017
Durban Forum on capacity-building	CGE members participated in the meetings of the Durban Forum on capacity-building in 2014–2016, presenting the work of the CGE on providing technical assistance to developing country Parties and concrete and innovative solutions tailored to enhancing developing country Parties' capacities
Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts	Two CGE members served on the interim Executive Committee in 2014, providing information on the activities of the CGE relating to vulnerability and adaptation assessment
Least Developed Countries Expert Group	CGE members participated in the NAP Expos organized by the Least Developed Countries Expert Group in 2014 and 2015
Paris Committee on Capacity-Building (PCCB)	The CGE participated in the 1st and 2nd meetings of the PCCB as an observer in 2017 and 2018, presenting its capacity-building activities
	The CGE made a submission highlighting the need for synergy and collaboration with the PCCB and agreed to continue providing input to the PCCB on capacity-building support through the web-based capacity-building portal

[32] FCCC/SBI/2017/12.

Entity	*Key collaborative activities*
Standing Committee on Finance (SCF)	The SCF shared its most recently approved workplan with the CGE, which shared its work programme and workplan with the SCF in response

83. In addition, the CGE has participated in other relevant mandated activities under the Convention, including the technical assessment of submissions from Parties on their proposed forest reference emission levels or forest reference levels. The CGE was invited[33] to nominate one of its experts from a developing country Party with relevant expertise to participate in the technical assessment as an observer, who did so in the first session of the technical assessment in 2014.

2. Intergovernmental organizations

84. In order to implement its work programme, the CGE worked closely with a number of international organizations in implementing its hands-on training workshops, webinars and the e-Network. The engagement helped the CGE to better coordinate and collaborate on several activities by capitalizing on available technical resources and networks. Further, it helped to disseminate the tools and training materials developed by the CGE and to reach out to a broader audience at the national level.

85. The CGE continued its cooperation and collaboration with the GSP in addressing the capacity-building needs of non-Annex I Parties for the process and preparation of their NCs and BURs. The CGE members from UNDP and UNEP regularly updated the CGE at its meetings on the implementation of the GSP with a view to facilitating the provision of targeted financial and technical support to developing country Parties. The GSP provided useful input to the work of the CGE, including contributing resource persons to regional hands-on training workshops and webinars, and collaborating on the organization of training workshops,[34] the translation of training materials, the dissemination of existing CGE training materials at the subregional and national level, and outreach activities on the preparation of NCs and BURs.

86. The GSP assisted the CGE in compiling information on existing activities and programmes to facilitate and support the preparation of NCs and BURs, and steps for integrating climate change considerations into relevant social, economic and environmental policies and actions.

87. Since 2016 the CGE has collaborated with the Technical Support Unit of the IPCC Task Force on National Greenhouse Gas Inventories in organizing the regional hands-on training workshops on sustainable national GHG inventory management systems and the use of the 2006 IPCC Guidelines (see para. 15 above). The CGE has also collaborated with the Technical Support Unit of the IPCC Task Force on National Greenhouse Gas Inventories on preparing training materials covering all sectors of the 2006 IPCC Guidelines.[35] In 2018, experts of the IPCC Working Group II, through the Technical Support Unit, provided technical expertise for the CGE workshop on identifying adaptation actions and reporting them in NCs.

88. FAO, UNDP and WHO provided technical resource persons, in their respective areas of expertise, for the CGE workshop on identifying adaptation actions and reporting them in NCs. In addition, FAO and WHO also collaborated with the CGE on its webinars. Other organizations that provided technical expertise included the Organisation for Economic Co-operation and Development and GIZ.

[33] Decision 13/CP.19, annex, paragraph 9.

[34] For example, the CGE collaborated with the GSP to organize two regional hands-on training workshops in 2017. For further details, see document FCCC/SBI/2017/15.

[35] Available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/consultative-group-of-experts-on-national-communications-from-parties-not-included-in-annex-i-to-the-cge-training-materials/cge-training-materials-for-the-preparation-of-national-communications-from-non.

3. International organizations

89. In 2018 the CGE engaged with a number of international organizations for its hands-on training workshops and webinars. It engaged the Hungarian National Adaptation Center, the Korea Adaptation Center for Climate Change and Winrock International for its webinars, and the Alliance for Global Water Adaptation and Deltares provided resource persons for the CGE workshop on identifying adaptation actions and reporting them in NCs.

90. The CGE collaborated with GIZ for a webinar, and in 2017 GIZ provided a resource person for the regional hands-on training workshops on the preparation and reporting of information on mitigation actions in NCs and BURs.

D. Communications and outreach

91. The CGE, with the support of the secretariat, has conducted various communication and outreach activities in order to reach interested stakeholders. The CGE has organized twice a year, on the margins of the United Nations Climate Change Conferences, a side event highlighting the activities of the CGE and providing opportunities for Parties to showcase how the technical support of the CGE has enabled them to prepare their NCs and BURs. In addition, the CGE prepared in 2016 and updated in 2018 a booklet highlighting its achievements. Furthermore, through the UNFCCC social media, the technical materials developed by the CGE have been shared extensively. As part of the relaunch of the UNFCCC website, the CGE web pages were updated accordingly.

V. Conclusions

92. Overall the CGE has successfully implemented the activities outlined in its work programme for 2014–2018, which has resulted in concrete outputs, including the following:

(a) Developing and disseminating a comprehensive set of training materials covering substantive areas of NCs and BURs;

(b) Training 1,041 national experts through 23 regional hands-on training and 25 webinars covering 1,142 experts on different themes of NC and BURs;

(c) Developing a training programme and training 385 experts on the UNFCCC roster of experts on the technical analysis of BURs;

(d) Developing and disseminating online training resources and other technical guidance tools, such as an e-learning programme on NCs and a technical tool to help Parties prepare for and participate in the ICA process;

(e) Undertaking targeted analytical work, such as compiling and synthesizing problems, constraints, lessons learned and best practices in the preparation of NCs and BURs,[16] and formulating recommendations on elements to be considered in a future revision of the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties.[17]

93. Recognizing that there is limited awareness of the mandate and activities of the CGE[18] among the stakeholders who are actively engaged in providing support to developing country Parties in the area of MRV, including bilateral and multilateral entities, the CGE also focused on strengthening cooperation and collaboration with other expert groups and constituted bodies under the Convention, as well as international organizations.

94. Although it has made a substantial contribution in providing technical assistance for improving the process and preparation of NCs and BURs by developing country Parties, the CGE encountered some constraints that impeded the efficiency and effectiveness of the

[16] See document FCCC/SBI/2017/16.
[17] See document FCCC/SBI/2016/17.
[18] See document FCCC/SBI/2017/15.

implementation of its mandated activities, such as a lack of stable and predictable financial resources to support its work, which added an element of uncertainty to the implementation of its work programme.[39] For instance, in 2017, the CGE faced financial resource constraints and as a result was not in a position to undertake some key planned activities, including the regional hands-on training workshop for the Latin American and Caribbean region on the preparation and reporting of information on mitigation actions in NCs and BURs.[40]

95. Over the period of five years, the CGE implemented a number of activities geared towards providing technical assistance to non-Annex I Parties on the preparation of NCs and BURs. With a view to understanding the impacts of those activities, the CGE assessed the effects of its implemented activities and the unique role it played.[41] It noted that the impacts are not easy to measure, particularly where Parties have not yet submitted their first BURs. The CGE also observed that the time and effort needed to prepare the second BUR is less arduous than the first one because Parties were able to make use of and build on the processes and institutional arrangements put in place for the preparation of their first BUR.

96. Drawing on the insights and experience gained from implementing its work programme, the CGE identified priority areas that could be useful in further enhancing the efficiency and effectiveness of its provision of technical assistance to developing country Parties:[42]

(a) Enhancing efforts to collaborate with interested partners, with the assistance of the secretariat;

(b) Playing a catalytic role in promoting and attracting intervention from interested partners by providing strategic guidance and direction to respond to the needs of developing country Parties for their national reporting;

(c) Strengthening communication and outreach activities so that stakeholders have a better understanding of the training products and opportunities available through the CGE;

(d) Creating formal regional networks of experts and practitioners involved in the process and preparation of NCs and BURs to serve as a vehicle for disseminating relevant information from the CGE to stakeholders;

(e) Facilitating, through regional forums or platforms, regional support and cooperation that aim to increase the regional capacity, and promoting sustainability of the institutional arrangements to prepare and submit NCs and BURs.

97. The CGE noted that there is a continued need and demand to enhance the national capacities of developing country Parties to prepare their NCs and BURs, with a focus on putting in place sustainable institutional arrangements. Further, with the adoption and entry into force of the Paris Agreement, the enhanced transparency framework established under Article 13 of the Paris Agreement will necessitate additional capacity-building support for some developing country Parties.

98. Finally, the CGE identified a list of key processes and arrangements that may be impacted by the outcome of the review by the SBI, upon request of the COP,[43] of the terms of reference of the CGE. These include the following:

(a) Implementation of decision 20/CP.19. Through this decision, the COP (1) requests the CGE to develop and organize appropriate training programmes for experts nominated to the UNFCCC roster of experts on the technical analysis of BURs; (2) mandates the CGE to guide the secretariat in selecting the members of the TTE and provide periodic advice to the secretariat to assist it in fulfilling the selection criteria contained in

[39] See document FCCC/SBI/2014/INF.15.

[40] See document FCCC/SBI/2017/15.

[41] See http://www.unfccc.int/national_reports/non-annex_i_natcom/cge/items/2608.php.

[42] See document FCCC/SBI/2017/19, paragraph 23.

[43] Decision 20/CP.22.

paragraphs 3 to 5 of the annex to the same decision and (3) requires the CGE to be part of a TTE that shall include, as a high priority and to the extent available, at least one CGE member and up to one third of the TTE;

(b) Technical advice and support to developing countries for the implementation of decision 17/CP.8 and its annex containing the guidelines for the preparation of NCs from non-Annex I Parties; decision 2/CP.17, paragraphs 39–44; and annex III containing the UNFCCC biennial update reporting guidelines for non-Annex I Parties;

(c) Engagement with the GSP and other partners with whom the CGE has been working closely.

99. The CGE thanked the Annex I Parties[44] and multilateral agencies[45] that provided financial resources for the successful implementation of the planned activities for its work programme for 2014–2018.

[44] Belgium, Canada, European Union, and Japan

[45] UNDP

Annex I

Implementation of the CGE work programme for 2014–2018

Output products	*Activities*	*Implementation timeline*				
		2014	*2015*	*2016*	*2017*	*2018*
Decision 19/CP.19, annex, paragraph 2(a): "Identify and provide technical assistance regarding problems and constraints that have affected the process of and the preparation of national communications and biennial update reports"						
Decision 19/CP.19, annex, paragraph 2(g): "Provide information and technical advice based on, where possible, lessons learned and best practices in the process of and preparation of national communications and biennial update reports by non-Annex I Parties"						
Technical report synthesizing the problems and constraints, lessons learned and best practices	1. Compilation of information on constraints, problems, lessons learned and best practices reported in:					
	1.1. Past CGE, complemented with additional CGE questions	x			x	
	1.2. NCs	x			x	
	1.3. BURs				x	
	1.4. Reports and other publications by the CGE, as well as other relevant institutions and agencies such as WRI, UNEP, UNDP, etc.	x			x	
	2. Synthesis of the compiled information	x			x	
	3. Provision of technical advice and support with respect to paragraph 2(g)	x			x	
Decision 19/CP.19, annex, paragraph 2(b): "Provide technical assistance and support to non-Annex I Parties to facilitate the process of and preparation of their national communications and biennial update reports"						
Decision 19/CP.19, annex, paragraph 2(c): "Provide technical advice to non-Annex I Parties to facilitate the development and long-term sustainability of processes of the preparation of national communications and biennial update reports"						

Output products	*Activities*	*Implementation timeline*				
		2014	*2015*	*2016*	*2017*	*2018*
I. BUR training materials in other official United Nations languages	1. Translation of CGE BUR training materials into other United Nations languages	x				
II. Updated CGE training materials	2. Update of CGE training materials to take into account the latest science and developments under the Convention		x			x
III. E-learning courses	3. Development, operation and maintenance of e-learning course	x	x	x	x	x
IV. A pool of national experts trained on the preparation of BURs and NCs	4. Conduct regional hands-on training workshop on the preparation of BURs					
V. Technical reports on the hands-on training workshops	4.1. Latin America and the Caribbean	x			x	
	4.2. Africa	x		x		
	4.3. Asia and the Pacific	x		x		
	5. Conduct regional hands-on training workshop on vulnerability and adaptation assessment					
	5.1. Latin America and the Caribbean		x			x
	5.2. Africa		x			x
	5.3. Asia and the Pacific		x			x
	6. Conduct regional hands-on training workshop on national greenhouse gas inventories[a]					
	6.1. Latin America and the Caribbean			x	x	
	6.2. Africa			x	x	x
	6.3. Asia and the Pacific			x		x
	7. Conduct regional hands-on training workshop on mitigation assessment					
	7.1. Latin America and the Caribbean				x	
	7.2. Africa				x	
	7.3. Asia and the Pacific				x	
	8. Conduct webinars addressing targeted themes		x	x	x	x

Output products	Activities	Implementation timeline				
		2014	2015	2016	2017	2018
Decision 19/CP.19, annex, paragraph 2(d): "Provide recommendations, as appropriate, on elements to be considered in a future revision of the guidelines for the preparation of national communications and biennial update reports"						
A paper on recommendations on possible elements to be considered in a future revision of the guidelines for the preparation of NCs and BURs	1. Revisit CGE recommendations on elements to be considered in a future revision of the guidelines for the preparation of NCs			x		
	2. CGE recommendations on elements to be considered in a future revision of the guidelines for the preparation of BURs[a]					
Decision 19/CP.19, annex, paragraph 2(e): "Provide technical advice and support to Parties, upon request, and information on existing activities and programmes, including bilateral, regional and multilateral sources of financial and technical assistance, to facilitate and support the preparation of national communications and biennial update reports"						
Decision 19/CP.19, annex, paragraph 2(f): "Provide technical advice and support to Parties, upon request, on the provision of information on steps to integrate climate change considerations into relevant social, economic and environmental policies and actions"						
I. Compendium of information on existing activities and programmes to facilitate and support the preparation of NCs and BURs	1. Compilation of information on existing activities and programmes to facilitate and support the preparation of NCs and BURs in collaboration with the UNDP and UNEP GSP	x				
II. Compendium of information on steps to integrate climate change considerations into relevant social, economic and environmental policies and actions	2. Compilation of information on steps to integrate climate change considerations into relevant social, economic and environmental policies and actions in collaboration with the UNDP and UNEP GSP	x				x
	3. Update of information on 1 and 2 above in collaboration with the UNDP and UNEP GSP					x
	4. Technical advice and support with respect to paragraph 2(e) and (f)	x	x	x	x	x
Decision 19/CP.19, annex, paragraph 2(i): "Develop and organize ... appropriate training programmes for nominated technical experts ... based on the most updated training materials"						

Output/products	*Activities*	*Implementation timeline*				
		2014	*2015*	*2016*	*2017*	*2018*
I. UNFCCC training programme for the team of technical experts II. Pool of experts nominated to the roster of experts trained and certified as the technical experts for conducting the technical analysis of BURs	1. Development of the team of technical experts training programme	x				
	2. Conversion of the team of technical experts training programme into a web-based training programme		x			
	3. Certification workshop/examination for the technical experts	x	x	x	x	x
	4. Revision of the training programme		x			x
Decision 19/CP.19, annex, paragraph 2(h): "Provide guidance and periodic advice to the secretariat to assist it in fulfilling the selection criteria for the composition of the team of technical experts"						
Periodic guidance and advice to the secretariat on the selection of the team of technical experts, as appropriate	Consideration of periodic technical report on the selection of the team of technical experts, as appropriate		x	x	x	x
Other elements of the work programme						
I. Participation in the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels	1. Participate in the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels	x	x	x	x	x
II. A training module under the team of technical experts training programme covering the technical analysis of data and information used by Parties in the estimation of anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest area changes	2. Identify elements for the team of technical experts training programme covering aspects relating to the technical analysis of data and information used and reported in BURs by Parties in the estimation of anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest area changes	x				

Output products	*Activities*	*Implementation timeline*				
		2014	*2015*	*2016*	*2017*	*2018*
III. Representation in the Executive Committee of the Warsaw International Mechanism	1. Participation in the work of the Executive Committee of the Warsaw International Mechanism	x				
	2. Stocktaking of activities undertaken by the CGE on vulnerability and adaptation	x				
IV. Long-term strategy addressing capacity-building needs of non-Annex I Parties in fulfilling their reporting requirements, including the long-term management plan of the CGE and provision of technical assistance	1. Develop long-term strategy, feedback and revision (including from the Subsidiary Body for Implementation)	x				
	2. Implement relevant elements of the long-term strategy		x	x	x	x
	3. Review and revise, as appropriate, the long-term strategy			x		
	4. Explore a potential additional workshop at the subregional/national level, subject to availability of resources	x	x	x	x	x
V. Updated five-year work programme and annual workplan	Review and revise the five-year work programme, including development of a specific work programme for the year		x	x	x	x
VI. Progress reports on the work of the Consultative Group of Experts, and communication and outreach on its activities	1. Meetings of the Consultative Group of Experts	x	x	x	x	x
	2. Side events of the Consultative Group of Experts	x	x	x	x	x
VII. Mapping of areas of collaboration and cooperation with other expert bodies and constituted bodies under the Convention	Identify possibilities for and develop collaboration and cooperation with other expert groups and constituted bodies under the Convention	x	x	x	x	x
VIII. Mapping of areas of collaboration and cooperation with other global initiatives, intergovernmental organizations and other relevant stakeholders	Identify possibilities for and develop collaboration and cooperation with key global initiatives, and international non-governmental organizations, the research community and academia involved in climate change activities	x	x	x	x	x

Output/products	*Activities*	*Implementation timeline*				
		2014	*2015*	*2016*	*2017*	*2018*
IX. List of relevant channels available to enhance communication and outreach X. Focused/targets communication products, such as brochure, pamphlets XI. Online resource platform XII. Enhanced outreach to wider group of stakeholder	1. Develop communication products targeting experts and global networks in non-Annex I Parties to disseminate 'quick-win' ideas and information on NCs and BURs, targeting national experts					
	2. Identify existing mechanisms and networks whereby non-Annex I Parties collaborate for the development of their NCs and assess their potential as a tool to enhance communication and outreach between the CGE and its stakeholders			x	x	x
	3. Provide and use an existing web-based platform for accessing information and guidance on the preparation of NCs and BURs			x	x	x
	4. Develop/update/maintain a web platform for CGE members to collaborate between sessions and meetings		x	x	x	x
	5. Create a formal network of experts and practitioners involved in the process of and preparation of NCs and BURs, by region to serve as a vehicle for the dissemination of relevant information from the CGE to stakeholders			x	x	x
	6. Promote the CGE long-term strategy and annual workplan to potential donors		x	x	x	x
	7. Integration of the gender action plan					x

Abbreviations: BURs = biennial update reports, CGE = Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention, Global Support Programme = Global Support Programme for Preparation of National Communications and Biennial Update Reports by non-Annex I Parties, IPCC = Intergovernmental Panel on Climate Change, NCs = national communications, SBI = Subsidiary Body for Implementation, UNDP = United Nations Development Programme, UNEP = United Nations Environment Programme, Warsaw International Mechanism = Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, WRI = World Resources Institute.

[a] The CGE has participated as resource person at the workshop organized by the secretariat, in collaboration with the IPCC, on the building of sustainable national greenhouse gas inventory management systems and the use of the 2006 IPCC Guidelines.

[b] The CGE decided not undertake this activity owing to the ongoing discussions in the negotiations of the Ad Hoc Working Group on the Paris Agreement.

Annex II

Reports prepared by the Consultative Group of Experts since 2014

[English only]

Title	*Document symbol*
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention	FCCC/SBI/2014/17
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: report on the regional training workshops on the preparation of biennial update reports from Parties not included in Annex I to the Convention	FCCC/SBI/2014/18
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: report on the workshop on the peer review of the materials for the training of the team of technical experts	FCCC/SBI/2014/19
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: long-term strategy of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention	FCCC/SBI/2014/INF.15
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: technical report on problems and constraints, as well as lessons learned and best practices, in the process of and the preparation of national communications and biennial update reports by Parties not included in Annex I to the Convention	FCCC/SBI/2014/INF.16
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: report on the training workshop for the African region on the preparation of biennial update reports	FCCC/SBI/2015/17
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention	FCCC/SBI/2015/18
Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: report on the regional training workshops on vulnerability and adaptation assessment	FCCC/SBI/2015/20
Regional training workshops on the preparation of biennial update reports from non-Annex I Parties	FCCC/SBI/2016/15

Title	*Document symbol*
Progress of work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention	FCCC/SBI/2016/16
Recommendations on elements to be considered in a future revision of the guidelines for the preparation of national communications from non-Annex I Parties	FCCC/SBI/2016/17
Technical report by the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention on the constraints in and recommendations for composing teams of technical experts	FCCC/SBI/2017/12
Progress of work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention	FCCC/SBI/2017/15
Updated technical report by the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention on problems, constraints, lessons learned and best practices in the preparation of national communications and biennial update reports	FCCC/SBI/2017/16
Regional hands-on training workshops on the preparation and reporting of mitigation actions in national communications and biennial update reports	FCCC/SBI/2017/17
Regional hands-on training workshop on the preparation and reporting of information on mitigation actions in national communications and biennial update reports	FCCC/SBI/2018/14
Progress of work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention	FCCC/SBI/2018/20
Regional hands-on training workshops on identifying adaptation actions and reporting them in national communications	FCCC/SBI/2018/21